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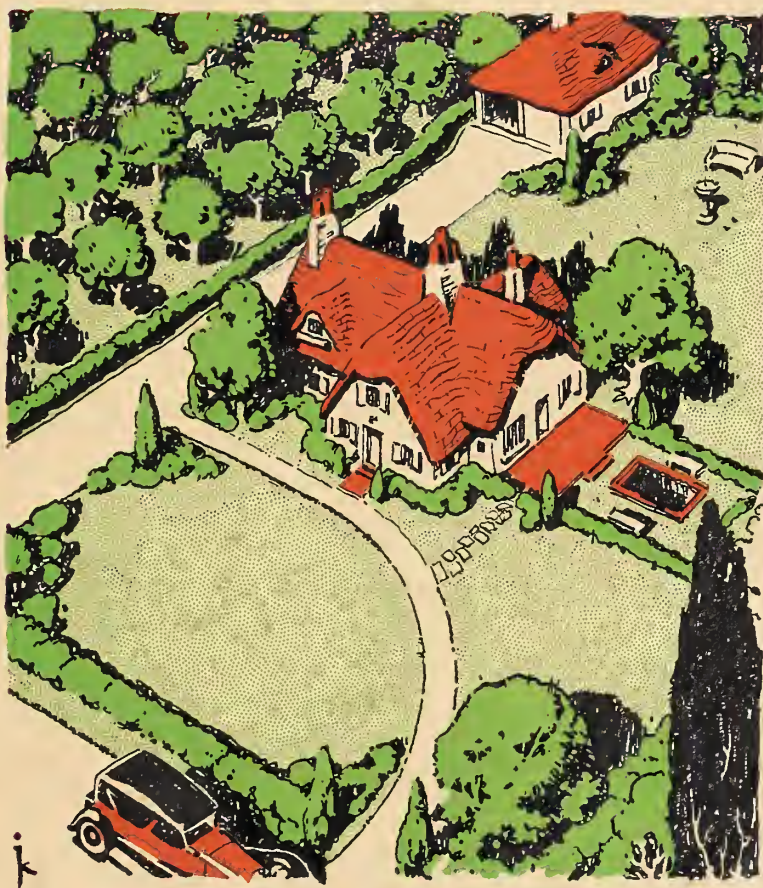
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MARSHALLS HAND BOOK

OF TREES SHRUBS
AND PLANTS



MARSHALLS NURSERIES
ARLINGTON NEBRASKA

TO THE READER

*It is important that you read this page
before turning to the pages that follow.*

IN the first place, please remember that this booklet is something more than a mere catalog, for in addition to containing all the information ordinarily found in a catalog, it is a handbook of valuable information which will help you get the utmost value from your purchases.

It will help you make an intelligent selection of planting material. The descriptive matter is written in terms that the amateur gardener will understand.

It is profusely illustrated, indexed for easy reference, and contains charts of typical planting problems. A study of them will enable you to select just the right material to give the effect you want.

Knowing climatic and soil conditions, we have listed only the most hardy stock—trees, shrubs, plants, and flowers which are sure to thrive in this section of the country if properly cared for.

Our interest does not cease when you have made your purchase. We insure your satisfaction by giving you explicit instructions in this Handbook on “How to Plant”—“Care of Plants”—“Spraying Guides”, and other helpful advice.

So save this Handbook and refer to it frequently—you’ll find it an invaluable aid.

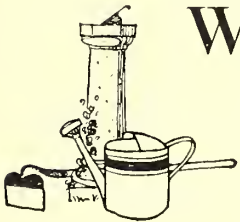
MARSHALLS NURSERIES

ARLINGTON, NEB.



The JOY of FRUITFUL and BEAUTIFUL GROUNDS

There is an Incomparable Joy in Living in the Out-of-Doors Amid the Beauties of a Well-Designed Yard and a Fruitful Garden



WHEREVER there is a garden there will be found a home rich in contentment. The beauty and mystery of flowers never palls on our fancy from childhood to old age. Nursery rhymes, children's stories, nature, poetry and literature abound with praise of flowers. They inspire the expression of the finest emotions of which we are capable.

Children who grow up amid trees and shrubs are notably happy in spirit, discerning and imaginative. The precious instinct to surround themselves with simple beauty is fostered, and when they grow up and build their homes this instinct finds expression in many ways. The moral and spiritual effect of flowers on character in the molding is incalculable.

"Grown-ups" feel the spell of a garden in no less degree. We have heard people tell

repeatedly of the fascination of their gardens—how their first thought upon waking in the morning is to look out of the window and thrill with pleasure at the loveliness of the garden. When this happiness may be had for six to eight months of the year, it surely is of great worth.





AN INVITATION to VISIT OUR NURSERIES

How to Reach Us

THE nurseries, comprising 300 acres, are located two miles east of Arlington on the high divide between the Elkhorn and Missouri rivers. The soil is of the famous "Loess", which is recognized by nurserymen and orchardists, as particularly adapted for root development. Trees and plants grown on this soil have more fibrous roots which makes transplanting more successful. The wood growth is also firmer and more mature than that of stock grown in rich valley soils. The root system is the really important part of every tree and plant. Marshalls trees have better roots.

Visit Us.

COME AND SEE US—We are proud of our nurseries and packing equipment, and take pleasure in showing lovers of trees and plants what we grow and how we handle it. Come and visit us at any time. You are always welcome and we will be glad to have you come whether you come as a purchaser or a visitor.



Block of 1-year Plums at Marshalls Nurseries

A STRICT STANDARD of ETHICS Governs Our Business Dealings

*The Confidence Of Our Customers Means
Far More to us than do Immediate Profits.*

FOR thirty-six years we have been building on the firm foundation of customer confidence. During this time we have been supplying fruit growers and flower lovers throughout the Central West with fruit trees, plants, and shrubs, which have given such satisfaction that every buyer has become a staunch friend and booster for our nurseries.

We stand squarely back of any nursery product we sell, and guarantee satisfaction to the customer at all times.

Only men who are honest, competent and trustworthy are employed to represent us. You can place full confidence in them. They are carefully instructed and are willing and anxious to serve you.

Ours is a complete line of nursery stock adapted to climatic and soil conditions of the Central West. Only varieties of proven hardiness are featured, and those especially hardy are indicated in this handbook with an asterisk (*).

Before a variety is added to our stock it is first given a rigorous test on our trial grounds. We also co-operate with the various experimental stations.

Please remember that we handle but one class of stock—the best. We do NOT list undersized, so-called “parcel post size” trees and plants, hence our prices may not compare with those which are used as “bait” by some of the “catalog nurseries”. But we say, without reservation, that quality considered, our prices are as low as can be found anywhere.

All culls are burned, the customer gets only first class stock of the right size for its age.



GEO. A. MARSHALL



CHET. G. MARSHALL



CHAS. W. ANDREWS



HARVEY W. MARSHALL



C.C. MARSHALL



VERNON MARSHALL



E. W. MARSHALL

These men direct the activities of The Marshall Nurseries at Arlington, Nebraska.



HOW WE SERVE YOU



You'll find every Marshall's Salesman courteous and eager to serve

HOW STOCK IS GROWN — From the beginning it has been the aim of Marshalls to grow the best trees and plants that it is possible to grow. No expense incidental to care, cultivation and handling of nursery stock that will tend to make it better, is spared. The most intensive cultivation is practiced from the time the

ground thaws out in the spring until it freezes in the fall. Moisture is conserved for the growing trees and plants and all nursery land is absolutely free of weeds at all times.

The pruning, pinching back, spraying and other operations essential to the growth of the best formed, well ripened stock is done only by experts and at exactly the right time for best results. It costs more money to grow stock this way, but the stock is better.

PACKING—Our Packing Building contains 25,000 square feet of floor space. It is constructed of brick and tile with walls 18 inches thick. The roof is also insulated against heat and cold. This provides unex-

celled facilities for handling and packing out of nursery stock. Changes of temperature in this building are very slow and with the moist, cool cellar condition which prevails, there is no chance for stock to dry out or be injured in any way from the time it is dug until it is delivered to the transportation company.

All stock is packed to stand, for three weeks, the usual conditions encountered on station platforms, in freight cars and at transfer points. Water-proof paper covers the wet packing material about the roots—each bale being then entirely covered with burlap and rye straw.

SHIPPING FACILITIES—We are located on the main line of the Chicago and Northwestern Railway, with excellent freight service, and twelve express trains daily. We guarantee stock to reach its destination in prime condition.

GUARANTEE

We exercise the greatest care to keep our varieties pure and true to name, and hold ourselves in readiness at all times to replace, on proper proof, all stock that may prove otherwise, or refund the amount paid; but it is mutually agreed between the purchaser and ourselves that we shall not at any time be liable for any amount greater than the original price. Marshalls trees and plants are guaranteed to be free from infectious diseases and dangerous insects—healthy, vigorous and well-formed. A State Inspector's Certificate accompanies each shipment.

OUR LANDSCAPE DEPARTMENT

Makes Garden Planning Easy



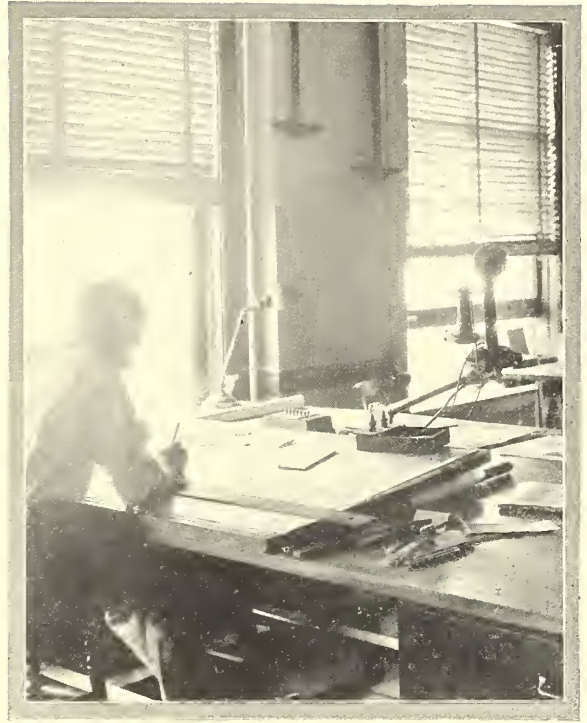
IN order to obtain the full return of value from your investment in trees, shrubs, etc., give due consideration to the correct placing of each tree and shrub in its relation to the house

or other buildings, to views which are desirable or unsightly, to shade, etc.

This involves a definite plan, which, if carefully worked out, will assure results that are highly profitable as well as gratifying from the standpoint of beauty. Property values definitely reflect the worth of attractive planting.

Landscape gardening is a highly developed art. Thru its application, unsuspected beauties of a property are brought into display. This is just as true of the small and modest property as it is of the larger and more pretentious. As the plantings grow into maturity thru the seasons, the results are satisfying in a big way.

We offer our customers an unequalled landscape service under the supervision of men whose good judgment and good taste founded on practical knowledge and experience enables them to assist you in the development of your home grounds so as to obtain immediate results and permanent satisfaction.



CONSULT US

Consult with us. No matter how extensive or how small your problem, we can develop a planting plan for you that will be a source of pleasure thru the years.

On the inside back cover of this catalog you will find a number of typical planting problems. These will assist you in making selections of plats for foundation plantings and plantings for other purposes.





ORNAMENTAL SHRUBS



PEOPLE, generally, are appreciating more the permanent value and beauty of shrubs. The charm and grace they lend to home grounds is invaluable, and, if judicious selection is made, it is possible to have a continuous succession of bloom from early in April to the days when the frost again nips the flowers of the very latest to bloom.

In many cases it would be better to plant shrubs in groups of several to one side of the lawn instead of following the method of planting one in a certain place and spoiling the effect of the open lawn. In most cases, three, six, eight, or twelve of one variety should be used in a particular grouping. Several such groupings make an excellent border or foundation planting.

(*) Asterisks indicate most hardy varieties.

PLANTING SUGGESTIONS—There is always a tendency to over-plant in the attempt of immediate effect. Don't be impatient, as it takes several years to grow mature plants. So, in planning your requirements here is a general rule to apply—on real good soil the spread of a shrub usually approximates the height, in other words, a five to six foot shrub will just about spread that much. Some exceptions are: Wahoo, Althea, Lilac and Tamarix.

ABOUT PLANTING—Dig holes and plant shrubs slightly deeper than they stood in the nursery row. Shake the plants so the soil will sift into the roots. Some shrubs have great masses of fibrous roots that if the soil is merely thrown on top, they will surely die. Contact with every root insures growth, so work the earth carefully through these masses. In pruning, take off about one-half the tops, at least a third.

ALMOND—

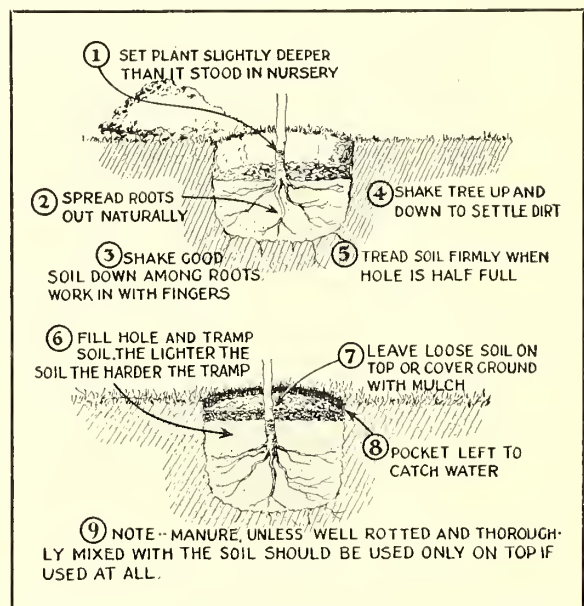
***Double Whiteflowering Almond**—The very double, rose-like white flowers entirely cover the branches with a white cloud of bloom. Blooms early in spring before its foliage appears. Used for cutting. One of grandmother's shrubs. Plant 3 to 4 inches deeper than when in nursery, so as to prevent sprouting from root.

***Double Pinkflowering Almond**—In all respects similar to the preceding variety, except that the flowers are rose-colored. This variety is even more frequently used than the one with white flowers.

ALTHEA, Shrub, (Hibiscus syriacus)—Also called Rose of Sharon. Bloom late in August and September. Have double rose, double white and double purple. Should not be planted north of Arlington. Semi-hardy. Height 3 to 8 ft.

ARROWWOOD—See Viburnum.

***BARBERRY, Japanese, (Berberis thunbergi)**—A pretty dwarf species that will fit into almost any planting and will grow in most any place. Handsome foliage of bright green oval shaped leaves,



Instructions for Planting Shrubs



which turn to the most brilliant shades of copper red and orange in autumn and which remain on until late fall. The slender, graceful little branches are lined with small scarlet berries, which hang until well into winter and help give life to the shrubby border, especially when there is snow on the ground. Used for foundation planting, group planting and hedges. (Does not harbor wheat rust). Height 2 to 4 ft.

BUTTONBUSH, Common, (*Cephalanthus occidentalis*)—Ball-like cluster of white flowers. July to September. Bright, glossy foliage. Splendid for groups, especially in moist soils and at water edges. Height 6 to 8 ft.

BRIDALWREATH—See Spirea.

***CHERRY**, Cistena, (*Prunus: Cistena*)—One of Prof. Hansen's Purple Leaf Sand Cherries. Has purple or deep red foliage and is used in shrubby borders for color. This is a cross of the Persian Purple Plum and our native Sand Cherry. Height 4 to 6 ft.

CORALBERRY—See Snowberry.

***COTONEASTER**, Peking, (*Cotoneaster acutifolia*)—A dense growing shrub with small, oval, glossy, dark green leaves. Absolutely hardy and stands partial shade. Heavy deep green leaves. Splendid in shrub plantings. Height 6 to 8 ft.

***CURRENT**, Mountain, (*Ribes alpinum*)—Yellowish green flowers are borne in clusters. The bright colored branches and refined foliage make it quite handsome. The glossy leaves are brilliant with color during the fall months. Very useful for dry soil. Grows well in shade. Height 6 to 8 ft.

CRANBERRYBUSH—See Viburnum.

DEUTZIA—

Slender Deutzia, (*Deutzia gracilis*)—Dense little bush, rarely over two feet high; blooms in May, pure white flowers. Semi-hardy. Height 1 to 2 ft.

Pride of Rochester Deutzia—Produces large double white flowers, tinged with rose. Blooms in May. Semi-hardy. Height 4 to 6 ft.

DOGWOOD—

***Coral Dogwood**, (*Cornus sibirica*)—Also called Red-twigged Dogwood. The bright red branches are very attractive during the winter, making a very pleasing contrast with evergreens and snow. Has white flat blossoms in early summer, followed by a profusion of whitish blue berries. Height 6 to 10 ft.

***Red-Osier Dogwood**, (*Cornus stolonifera*)—Similar to Coral Dogwood, although twigs do not color so well, but foliage has better autumn color. Height 5 to 8 ft.

***Goldentwig Dogwood**, (*Cornus stolonifera flaviramea*)—A variety of Red-Osier, similar except twigs are a bright yellow in winter. Height 5 to 8 ft.

ELDER—

***American Elder**, (*Sambucus canadensis*)—This is our common Elder, good for parks, roadsides, etc., where a natural effect is desired. Berries useful for pies. Rapid grower. Blooms, broad, white, in June, followed by reddish-purple berries. Height 6 to 10 ft.

Cutleaf Elder, (*Sambucus laciniata*)—Similar to American Elder, except foliage is cut-leaved. Used in grouping for contrast of foliage. Height 6 to 10 ft.

***Golden Elder**, (*Sambucus aurea*)—Similar to



Japanese Barberry

American Elder, except foliage is a striking golden yellow. Very good for color contrast. Height 6 to 10 ft. Give them plenty of room, for they grow quite large and spreading.

EUONYMOUS—

Winged Euonymus, (*Euonymus alatus*)—A distinctive shrub which is chiefly ornamental and interesting on account of its curious corky bark. The small, delicate flowers in the spring are followed by attractive red berries in the fall. Height 5 to 8 ft.

Wahoo, (*Euonymus atropurpureus*)—Used for a large shrub or small tree. It might be mistaken for a wild plum, except for its fluted ash-grey bark. Beautiful red fruit similar to the false Bittersweet, which shows its beauty chiefly in the dead of winter. Height 8 ft.

FORSYTHIA—

***Border Forsythia**, (*Forsythia intermedia*)—The golden yellow flowers appear very early in the spring, before the leaves. Shiny dark green leaves, which persist until frost. Height 6 to 8 ft.

Weeping Forsythia, (*Forsythia suspensa*)—Sometimes called Golden Bell. Leaves and flowers about the same as the Border Forsythia. This sort is an extremely graceful shrub, with long, drooping branches. Some people are impatient with its viny appearance the first two years. Height up to 8 ft.

HAZELNUT, American, (*Corylus americana*)—A vigorous shrub, with numerous upright branches. Large, heart-shaped leaves. Nuts edible and enclosed in ruffled husks. Height 8 ft.

HONEYSUCKLE—

***Morrow Honeysuckle**, (*Lonicera morrowi*)—A native of Japan. Pure white flowers, which change to yellow tones, are produced in great profusion early in the spring. After them appear a multitude of bright red berries, which ripen during the summer and stay on until fall. A dense growing shrub, growing well to the ground, with a good green foliage that comes out early and stays late. Grows in shade near tree roots or where a dependable shrub is needed. Height 4 to 6 ft.

***Tatarian Honeysuckle**, (*Lonicera tatarica*)—We have a pink, white and red of this variety. Pink seems to be the favorite. There is not much difference between red and pink. Blooms in June. During the summer and autumn the bush is covered with orange and red berries.



Brilliant green foliage. Grows in shade. Good for screening. Height 6 to 10 ft.

HYDRANGEA—

***Peegee Hydrangea**, (*Hydrangea paniculata grandiflora*)—An excellent flowering shrub. Small white flowers borne in large pyramidal shaped clusters during July and August, when few other shrubs are in bloom; later turning to rich shades of pink and coppery red. Good for cutting, lasting as a winter decoration. Grows best when protected from afternoon sun. Height 3 to 5 ft.

Snowhill Hydrangea, (*Hydrangea arborescens grandiflora*)—Sometimes called Snowball Hydrangea or Hills of Snow. Starts blooming in June and continues until frost. Flowers rather round clusters, white, turning green. Excellent foliage. Grows best when protected from afternoon sun. Height 2 to 4 ft.

LILAC—

***Common Lilac**, (*Syringa vulgaris*)—The Lilac of our childhood, whose fragrance we cannot forget. Excellent for border planting and for tall hedges. Beautiful rich green foliage. Height 6 to 8 ft.

***Common White Lilac**, (*Syringa alba*)—Same as common Lilac, only flowers white.

***Hungarian Lilac**, (*Syringa josikaea*)—Flowers in June, after other Lilacs are no longer in bloom. The deep purple buds, arranged in loose panicles, open into light violet-colored flowers, a distinct type, with dark green leaves. Excellent for shrubby borders. Height 8 to 10 ft.

Peking Lilac, (*Syringa pekinensis*)—See trees.

Persian Lilac, (*Syringa persica*)—We do not handle. See next variety below.

***Purple Chinese Lilac**, (*Syringa chinensis saugeana*)—An improvement of the Persian Lilac. Has been listed generally as Persian Lilac, but is superior. Bloom similar to common purple. Foliage smaller and not so dense, but shrub is almost sure to bloom next year planted. Does not sprout. Excellent in groups. While there are some lighter shades of Chinese Lilacs, the demand has not warranted our propagating them. Height 5 to 8 ft.

NAMED LILACS—The named sorts have heavier flowers than the old common type and they bloom when plants are much younger. Height 6 to 8 ft.

***William Robinson**—Double, deep violet.

***Alphonse LaVallee**—Double, blue shaded violet.

***Michael Buckner**—Double pale Lilac.

***President Grevy**—Double, blue.

***Madam Abel Chatenay**—Double, white.

***Madam Lemoyne**—Double, pure white.

***Frau Bertha Dammon**—Single, pure white.

***Chas. X.**—Single, reddish purple, large.

***Ludwig Spach**—Single, dark purple, fine.

***Charles Joly**—Double, reddish-purple.

MOCKORANGE—

***Big Scentless Mockorange**, (*Philadelphus grandiflorus*)—Incorrectly called Syringa. Very hardy. Large, handsome foliage, beautiful large white flowers in June; used for cutting. Height 8 to 12 ft.

***Sweet Mockorange**, (*Philadelphus coronarius*)—Similar to above variety. Flowers not so large, but fragrant. Height 6 to 10 ft.

***Juno Mockorange**, (*Philadelphus erectus*)—Foliage same light green as above varieties, but not so large. Compact grower, used for variety where a medium size shrub is needed. Can be used against south and west foundations. (The *P. coronarius* was crossed with the very dwarf *P. microphyllus* and the shrub was called *P. lemoinei*. Then the Juno was developed from this variety). Height 4 to 6 ft.

Golden Mockorange, (*Philadelphus coronarius aureus*)—Foliage remains bright through the season. Height 6 to 10 ft.

***Virginal Mockorange**, (*Philadelphus virginialis*)—A magnificent new variety. Moderately tall; good foliage and compact habit. The flowers are the largest, handsomest and most sweetly fragrant of any known variety.

NANNYBERRY—See Viburnum.

NINEBARK—

***Common Ninebark**, (*Physocarpus opulifolius*)—It grows rapidly, upright, although its branches droop when laden with white flowers in clusters, followed by brightly colored seed pods that are very showy. A splendid shrub for mass planting, borders, etc. Height 5 to 8 ft.

Goldleaf Ninebark, (*Physocarpus opul. aureus*)—Similar to above variety except that foliage is light yellow color, with gold color in early spring. Height 5 to 8 ft.

***PEA-TREE**, Siberian, (*Caragana arborescens*)—A shrub or low tree, yellow pea-like flowers in May. Very hardy even in the Dakotas. Height 8 to 10 ft.

PLUM, Flowering—See Ornamental trees.

PLUM, Purple—See Cherry in this list.



The Beautiful Snowhill Hydrangea



Lilacs

PRIVET—

***Amur Privet, (*Ligustrum amurense*)**—This is the Russian variety. Hardest Privet. Excellent green foliage, upright habit of growth, suitable for lawn hedges. Easily trimmed. For those south of Arlington who want a nice green trimmed hedge there is nothing better. North of here it occasionally freezes back, but comes up from the crown with a thick, fine hedge the first season. Height 3 to 5 ft.

Regel Privet, (*Ligustrum regelianum*)—Also called the Fun-leaf Privet. Handsome, shining foliage and horizontally spreading branches. Used for foundation and lawn borders. A little more tender than Amur Privet. North of here a winter may freeze it half way or all down, but the roots do not kill. Should be used with this in mind, and can be used with idea of trimming it. A few graceful hedges have been made of it south of here. It has been used too much in the north because of its pretty qualities being considered without its faults. Height 3 to 5 ft.

***QUINCE, Flowering, (*Cydonia japonica*)**—Hardy and very interesting shrub. Has a beautiful scarlet and sweet-scented flower, very early in spring. Height 3 to 5 ft.

SNOWBALL—See *Viburnum*.

SNOWBERRY—

***Coralberry, (*Symphoricarpos vulgaris*)**—Small, low growing shrub of very pretty habit, slightly drooping, flowers very small, fruit purplish-red and hangs on all winter. Foliage excellent, green throughout the season. Thrives both in sun and shade, and one of the best low shrubs to plant close to trees. Height 2 to 3 ft.

***Garden Snowberry, (*Symphoricarpos racemosus laevigatus*)**—A small, low growing shrub of very pretty habit. Flowers very small, fol-

lowed by a pure white round fruit, the size of marbles. While it is used in both sun and shade, it occasionally mildews in the shade. Height 2 to 3 ft.

SPIREA—

***Anthony Waterer, Spirea, Spirea: A. W.)**—A dwarf pink shrub and blooms so freely that it may be kept in flower throughout the summer until late fall by trimming away the dead blooms. Flower clusters are about 3 to 6 inches wide. The foliage is handsome, being variegated with creamy white or yellow, and sometimes is tinted with pink. Used for low hedges along walks and drives, and for lawn or foundation groupings.

Height 1½ to 2 ft.

Billiard Spirea, (*Spiraea billiardi*)—An upright growing shrub with narrow, dense spikes of bright pink flowers from July on. Good for cut flowers. Height 4 to 6 ft.

Double Bridalwreath, (*Spiraea prunifolia plena*)—As the leaves are opening, small, snow-white double flowers wrap themselves along the branches in a lavish display of bloom. Height 5 to 6 ft.

***Froebel Spirea, (*Spiraea froebeli*)**—Similar to A. W. Spirea. Grows a trifle higher. Very good. Height 2 to 4 ft.

***Garland Spirea, (*Spiraea arguta*)**—Similar to Thunberg Spirea; foliage not as fine, a darker green, which does not show so much yellowish in summer, and blooms earlier. Height 3 to 4 ft.



Mockorange



Vanhoutte Spirea (Bridal Wreath)

***White Japanese Spirea**, (*Spiraea ovalifolia*)—Has been listed as *Spiraea callosa alba*. Similar to A. W. Spirea, only bloom is white and foliage not variegated. Height 1 to 2 ft.

***Thunberg Spirea**, (*Spiraea thunbergi*)—Low growing, rounded, abundant small white flowers in May almost cover the bush. Foliage is quite dense. Leaves narrow, light green. Height 3 to 4 ft.

***Vanhoutte Spirea**, (*Spiraea vanhouttei*)—Nicknamed V. H. Spirea and also called Bridal Wreath, although there is an old variety by that name. Used for foundations and border groupings and for hedges. Graceful, arching branches. Good light green foliage, which stays bright during the summer, changing to a beautiful color during the autumn, and its dense shrubby appearance is even valuable in the winter landscape. The common way of planting these has been in singles, but their value in groups and hedges is increasing in favor. Flowers pure white in May and early June. Height 3 to 6 ft.

***Ural False Spirea**, (*Sorbaria sorbifolia*)—Leaves similar to Mt. Ash. Long, showy panicles of white flowers in midsummer. Height 4 to 6 ft.

SUMAC—

***Fragrant Sumac**, (*Rhus canadensis*)—Sometimes called aromatic Sumac. Much branched, spreading shrub. Flowers bright yellow, in small clusters, followed by red berries. Foliage becomes brilliant scarlet in autumn. Height 3 to 5 ft.

***Smooth Sumac**, (*Rhus glabra*)—Our common Sumac. Used where natural groupings are desired. Height 5 to 8 ft.

***Staghorn Sumac**, (*Rhus typhina*)—Foliage similar to the common Sumac, only larger. The new growth of the smaller branches is clothed with a peculiar down, giving an appearance similar to the growing horn of a deer. Used

for groupings. Height 8 to 12 ft.

***Shredded Sumac**, (*Rhus typhina laciniata*)—This is a fern-leaf or lace-leaf variety of Staghorn Sumac and is used considerably in border groupings. Height 8 to 12 ft.

TAMARIX—

***Fivestamen Tamarix**, (*Tamarix pentandra*)—A shrub or small tree of very graceful form, with asparagus-like foliage. Flowers showy, brilliant pink, blooming in July. There are several varieties of Tamarix, but this is one of the hardiest, finest foliage and darkest bloom. Height 8 to 10 ft.

***Amur Tamarix**, (*Tamarix amurensis*)—Hort. var. of *T. pentandra*. This variety seems to have a foliage that does not rust as much as the Fivestamen Tamarix. Blooms freely, the branches fairly covered with small spikes of dainty pink flowers.

VIBURNUM—

***Arrowwood**, (*Viburnum dentatum*)—A bushy shrub with upright branches. Leaves heart-shaped, coarsely toothed; flowers profuse, in flat topped clusters, white, followed by very showy black berries. Height 10 to 12 ft.

***Cranberrybush**, (*Viburnum opulus*)—A bushy shrub with foliage of good green. Leaf similar in shape to the Snowball. Very showy in red berries, which begin to color in mid-summer and hold well throughout the winter. Height 10 to 12 ft.

***Nannyberry**, (*Viburnum lentago*)—Shrub or small tree, flowers white, in flat topped clusters, 2 to 5 inches broad. Fruit oval, bluish black. Foliage turns beautiful orange and red in autumn. Height 10 to 12 ft.

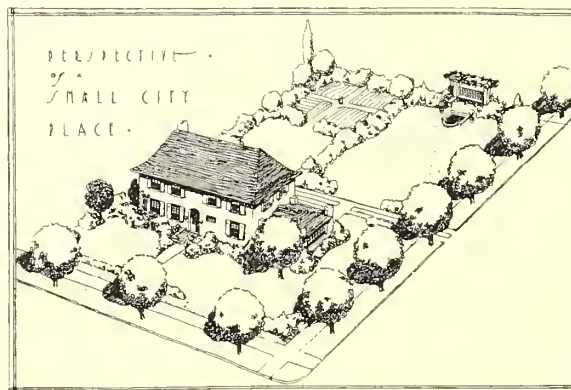
***Snowball**, (*Viburnum opulus sterile*)—This is the common Snowball, one of the most popular of spring blooming shrubs. Its flower clusters are ball-like, pure white, and produce no fruit or seeds. Height 6 to 10 ft.

***Wayfaring-Tree**, (*Viburnum lantana*)—A large shrub, with rough branches and large heart-shaped leaves. Flowers white flat clusters. Red berries, which later turn to black, follow the flowers. Height 8 to 10 ft.

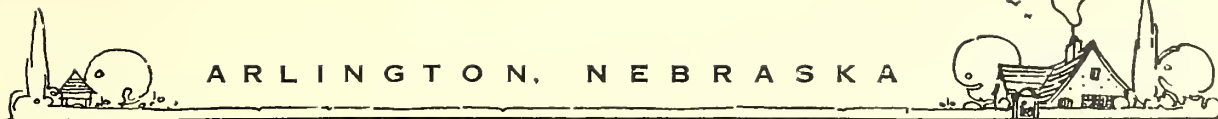
WEIGELA—

***Pink Weigela**, (*Weigela rosea*)—Early flowering rose, bell-shaped flowers. Semi-hardy. Protect from winter sun. Plant on north or east side of house. Height 3 to 6 ft.

***Vanhoutte Weigela**, (*Weigela hybrida vanhouttei*)—Similar to preceding variety, except flowers light red.



Consult Our Landscape Dept. See Page 5.



A HANDY REFERENCE LIST of ORNAMENTAL SHRUBS

Shrubs for Low Foundations

Spirea, several
Japanese Barberry
Coralberry
Snowberry
Hydrangea
Rugosa Rose
Weigela

Shrubs for Screening Purposes

Honeysuckle
Lilac
Mockorange
Tamarix

Shrubs Near Tree Roots

Coralberry
Morrow Honeysuckle

Attractive of Bark

Dogwoods
Euonymus

Can Be Trimm'd Globe Shape

Jap. Barberry
Mountain Currant

TWELVE POPULAR SHRUBS

Vanhoutte Spirea
Jap. Barberry
Peegee Hydrangea
Snowhill Hydrangea
A. W. Spirea
Garland Spirea
Tatarian Honeysuckle
Coral Dogwood
Purple Chinese Lilac
Sweet Mockorange
Juno Mockorange
Tamarix

Shrubs for Shady Locations

Vanhoutte Spirea
Japanese Barberry
Coralberry
Hydrangeas
Honeysuckles
Dogwoods
Privets
Sumacs
Elders
Mountain Currant
Deutzias

Shrubs for South and West Foundations

Vanhoutte Spirea
Billiard Spirea
Barberry
Coralberry
Snowberry
Garland Spirea
Mockorange
Privet
Ninebark
Currant
Forsythia

Attractive of Berry

Barberry
Coralberry
Snowberry
Dogwood
Honeysuckle
Privet
Elder
Cranberrybush
Euonymus
Rugosa Rose

Shrubs With Colored Leaves

Golden Elder
Golden Mockorange
Cistena Cherry



QUICK REFERENCE LIST of SHRUBS for HEIGHT

DWARF SHRUBS

Up to 5 Ft.

Barberry
Coralberry
Snowberry
Hydrangea
A. W. Spirea
Froebel Spirea
Jap. Spirea
Garland Spirea
Thunberg Spirea
Deutzia
Rugosa Rose

*See Preceding Pages for Full
Description of Shrubs.*

MEDIUM SHRUBS

5 to 8 Ft.

Vanhoutte Spirea
Billiard Spirea
Double Bridalwreath
Ural False Spirea
Morrow Honeysuckle
Dogwood
Privet
Juno Mockorange
Forsythia
Fragrant Sumac
Weigela
Currant
Ninebark
Althea
Buttonbush
Cotoneaster

TALL SHRUBS

6 Ft. Up

Tatarian Honeysuckle
White Belle Honeysuckle
Lilac
Mockorange
Sumac
Elder
Tamarix
Snowball
Cranberrybush
Viburnums
Euonymus
Pea-tree

*See Preceding Pages for Full
Description of Shrubs.*



HEDGES

BEAUTIFY as they SERVE

FOR boundary, screen or barrier there is nothing more pleasing than a hedge fence. With their bright green leaves they constantly bring a feeling inspired by the fresh foliage of spring. When formally trained or left to develop naturally their arched branches, colored foliage and bright berries are surely more pleasing than the mechanical effect obtained by the similar use of wood or metal. Most hedges are permanent and with the exception of occasional shearing they need little attention after being established.

PLANTING—The distances vary according to the conditions. Where an impenetrable hedge is wanted, plant the Privets 6-10 inches, Japan Barberry 8-12 inches and the flowering shrubs 12-18 inches apart. Where height is wanted rather than thickness then double the distance. Most hedges should be severely pruned at planting time. The after pruning should consist of clipping the young growth at regular intervals.

***JAPANESE BARBERRY HEDGE**—Used extensively where a good, dwarf, bushy hedge is desired. The foliage is an excellent green, leaving early in spring, turns to a beautiful coppery red in the fall, followed by pretty red berries. It is not susceptible to wheat rust. Can be grown either trimmed or untrimmed, with a height of from 1½ to 3 ft. Plant 8 to 12 inches apart.

***AMUR PRIVET HEDGE**—The hardiest Privet. Upright grower, foliage glossy green. Generally kept sheared from 2 to 4 ft. high. Plant 6 to 12 inches apart and 3 to 4 inches deeper than they were in nursery.

***VANHOUTTE SPIREA HEDGE**—Commonly called Bridalwreath. Flowers pure white in May and early June. Good foliage, and very hardy. Generally used as an untrimmed hedge, but can be trimmed. Height 3 to 6 ft. Plant 12 to 18 inches apart.

***MULBERRY HEDGE**—Many plant this for a cheap hedge. Very coarse for lawn and shows stalks with age. Generally trimmed 4 to 5 ft. high. Plant 6 inches apart in double row, 8-12 inches between rows.

***ANTHONY WATERER SPIREA**—Dwarf, pink bloom all summer. Trimming away the dead blooms increases flowering. Used considerably as a hedge along walks and drives. Height 1½ to 2 ft. Plant 8 to 12 inches apart.

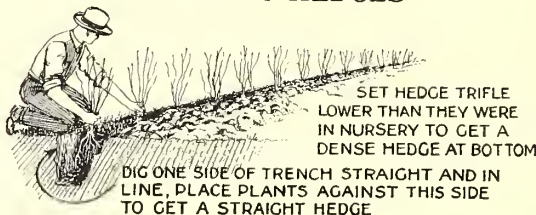
***BABY RAMBLER ROSE**—Dwarf rose. See Roses. When planted as a hedge, is generally placed along walks or drives about 18 inches apart.

***VOLGA POPLAR**—This tree is used considerably as a high hedge for screening undesirable views. Grows quick and does not grow very wide. Is generally planted 5 ft. or more apart.



For a heavy screen there is nothing more effective than the Volga Poplar

SUGGESTIONS FOR PLANTING HEDGES



A Hedge of Vanhoutte Spirea



VINES

ADD CHARM and BEAUTY

WITH their variance in color, their beauty of foliage and blossom, their grace wherever used, these vines frequently provide the finishing touches of any planting. Some adhere to the masonry, some must be trained through lattice or trellis and others with their tendrils will cling tenaciously, unshaken by wind or weather.

***BETA GRAPE**—Very hardy, good grower. Fruit of medium size and fair quality. Good for pergolas and arbors.

BITTERSWEET, American, (*Celastrus scandens*)
—Noted for its clusters of orange fruit which are so attractive in the fall and which are used for winter interior decoration.

***CLEMATIS, Sweet Autumn, (*Clematis paniculata*)**
—Rapid grower. Small white star-like flowers during late summer and early fall. Should be cut back each spring. Good for shade and arbors.

CLEMATIS, Jackman—Profuse bloomer in summer. Large purple flowers, not so easy to transplant. Should be planted on north or east of building. Is tender and fragile and should have care while starting.

CLEMATIS, Ville de Lyon—Same type vine as Jackman, only flowers are red.

CLEMATIS, Henry—Same type as Jackman, only flowers are white.

CREEPER, Japanese, (*Ampelopsis tricuspidata*)
Has been called Boston Ivy (*Ampelopsis veitchii*).



Englemann's Ivy

Three-lobed leaves. Colors in fall. Clings to stucco, stone or brick. Semi-hardy.

***CREEPER, Virginia, (*Ampelopsis quinquefolia*)**
Five-lobed leaves. Foliage brilliant, red and scarlet tints in autumn. Blue berries. Excellent to shade porch and arbors.

***ENGELMANN IVY, (*Ampelopsis quin. engelmanni*)**—Similar to Virginia Creeper, except this vine clings to brick, stone or stucco, and is the hardest vine for this purpose.

***HONEYSUCKLE, Hall Japanese, (*Lonicera hal-liana*)**—Good green foliage. Flowers pure white, changing to yellow. Blooms July to late fall. Excellent vine for porch, arbor or ground cover.

***HONEYSUCKLE, Scarlet Trumpet, (*Lonicera sempervirens*)**—Scarlet flowers two inches long. Blooms profusely and is very showy. Excellent vine for porches and arbors.

***HONEYSUCKLE, Yellow Trumpet, (*Lon. semp. sulphurea*)**—Similar to preceding variety, except flower is yellow.

***TRUMPET CREEPER, (*Bignonia radicans*)**—A hardy climber, large trumpet shaped flowers, 2 to 3 inches long, brilliant scarlet in August. Good for walls or trees.

***WISTERIA, Purple, (*Wisteria sinensis*)**—Rapid grower. Flowers pale blue, borne in long pendulous clusters in May and June. Good for pergolas.

***WISTERIA, Selected Purple, (grafted)**—A selected variety, having superior bloom and blooming much younger than the old types.



Clematis Paniculata



ROSES

THE QUEEN of FLOWERS

ROSES are the most beautiful of flowers and are among the easiest to raise. We have given great care to the culture of the plants we offer and the following list will be found worthy and well suited to our climate.

Our roses are strong, dormant plants, grown outdoors, well rooted and in every way first class. They have in most cases already bloomed before being set out and we believe will give satisfaction and permanent success.

They thrive best in a good, well-drained clay soil, where they can have plenty of sunlight. Make the ground rich with well-rotted manure, and in spring severely prune all varieties except climbers.

As all hybrid roses bloom on new wood only, they should be cut off from eight to ten inches above the ground each spring; thus they will send up good, strong shoots each spring, which will produce much larger bloom than will the weak, slow growth of the old wood if left untrimmed. Clipping off the seed pods will also aid in the blooming. They should be protected in winter by throwing a mound of earth around them ten or twelve inches high during the fall, removing same in spring.

(*) Those marked with an asterisk indicate the most hardy in this section.

HARDY CLIMBING ROSES

CRIMSON RAMBLER—The famous crimson clustered climber. One of the hardiest.

***EXCELSA**—Often called Red Dorothy Perkins. Brilliant scarlet crimson. More resistant to rust and mildew than Crimson Rambler. Very hardy.

***DOROTHY PERKINS**—Clear, shell pink, borne in clusters. Same vine qualities as the Excelsa. Very hardy.

TAUSENDSCHON, (Thousand Beauties)—Buds bright cherry pink, changing to lighter shades; frequently light red, pink and pure white flowers all in the same cluster.

PRAIRIE QUEEN—Large rose pink flowers.

SEVEN SISTERS—White to crimson.

***WHITE RAMBLER**—Snow white rose, borne in clusters.

DWARF POLYANTHA ROSES

(Baby Ramblers)

The dwarf roses are favorites everywhere because of their hardiness and ever-blooming qualities. They bloom constantly thruout the growing season. Height 12 to 24 inches.

Red Baby Rambler Pink Baby Rambler
White Baby Rambler

HYBRID TEA ROSES

Bloom all summer. Height 12 to 24 inches. Should be protected for winter with mound of earth about plants 8 to 12 inches high, which should be removed April 1st and tops cut off 8 to 10 inches above ground.

GRUSS AN TEPLITZ—One of the best and most valuable ever-blooming roses. Place in foreground of rose bed or by themselves for display beds. Blooms from spring until frost. Color red.

HOOSIER BEAUTY—A large, full flower, with well shaped buds on single stems; sweetly scented; red. Good for cutting.

KAISERIN AUGUSTE VIKTORIA—A delicate



Snow Queen

creamy white. Very fragrant. Good for cutting.

KILLARNEY—A good shell-pink. A favorite bud rose.

RED RADIANCE—Rich cerise red. Vigorous. Good for cutting.

MME. EDOUARD HERRIOT—The buds are a deep coral-red, shaded with yellow. Free bloomer. (Pernetiana type).

HYBRID PERPETUAL ROSES

(Give winter protection as for Hybrid Teas). This type blooms once, twice or three times. Give winter protection, but do not cut back as severely as Hybrid Teas.

AMERICAN BEAUTY—Deep pink. Fragrant. Good bloomer. Good for cutting. Little harder to winter than other H. P. roses.

FRAU KARL DRUSCHKI (Snow Queen)—The grandest of all white roses. Excellent white. Flowers large. Plant three or more of these.

GENERAL JACQUEMINOT (Gen. Jack)—An excellent crimson. Fragrant.

J. B. CLARK—Intense, deep scarlet, heavily shaded blackish crimson.

PAUL NEYRON—One of the finest hardy roses grown. It blooms from June to November, on long, smooth, thornless stems, furnishing a great quantity of uniformly shaped flowers; 4 to 6 inches across. Color, a bright ruddy pink. Sometimes called the Cabbage Rose, on account of its size. Plant three or more of these.

MAGNA CHARTA—Bright pink, suffused with crimson.

MRS. JOHN LAING—Soft, delicate pink. Good bloomer.

BLACK PRINCE—Dark, velvety crimson, changing to maroon. Does not transplant easily.

SOLEIL D'OR—French for Sun of Gold. Orange yellow. Does not transplant easily. (Pernetiana type).

RUGOSA ROSES

(No Winter Protection Required)

***RUGOSA ROSE**—Common variety. Very dark green, glossy, wrinkled leaves. Large red, pink



or white single flowers practically all summer, followed by very large red fruit hips, which remain all winter. Should be used as shrubs for foundation and border planting. Does well in shade. Blooms June to October. Height 5 to 6 ft.

HYBRID RUGOSA ROSES

(No Winter Protection Required)

HANSA—Medium grower. Large, double, reddish violet flowers. True Rugosa foliage.

SIR THOMAS LIPTON—Double white.

CONRAD FERD. MEYER—Good Rugosa foliage. Flowers double, silvery pink.

JUNE ROSES

(No Winter Protection Required)

This class covers the old-fashioned roses which bloom only once during the season. Hardy. Fragrant.

***PERSIAN YELLOW ROSE**—Bright golden yellow flowers, highly double, in great profusion. Height 6 ft.

***MOSS ROSES**—Hardy; old favorites of our grandmothers. Moss-like appearance on stems and sepals. Can be supplied in red, white and pink. Height 6 ft.

WILD ROSES

(No Winter Protection Required)

These varieties are used along with the hardy shrubs in foundation planting, in the border, on banks, etc.

***MEADOW ROSE, (Rosa blanda)**—Slender stems, no thorns; bright red bark, pink flowers, May and June. Height 4 ft.

***HUGONIS ROSE**—Sometimes called Father Hugo's Rose. Long, arching branches, closely set, with very lovely single yellow flowers very early in

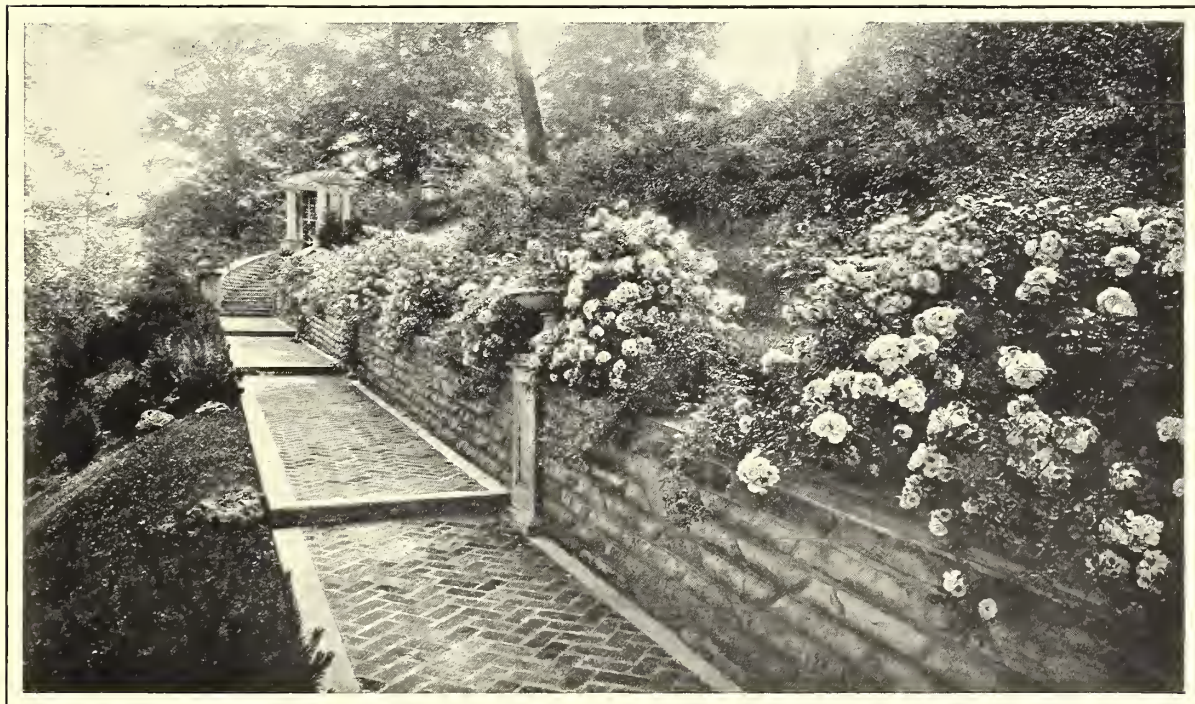


Gruss an Teplitz

the season. Finely divided foliage. May and June. Height 8 ft.

***PRAIRIE ROSE, (Rosa setigera)**—Long, recurving branches, excellent for banks and terraces. Single deep rose, flowers in June, followed by clusters of red berries in fall. Height 6 to 8 ft.

***WICHURIAN ROSE, (Rosa wichmaniana)**—Sometimes called Memorial Rose. A handsome trailing rose; white flowers; glossy foliage; particularly satisfactory for covering banks and rockeries. June.



The effective use of Hugonis and Wichurian Roses



HARDY PERENNIAL FLOWERS



FOR permanent planting, for variance, for beauty of flower and pleasure, the perennial plants offer a field from which one may select in color, or in period of bloom, plants to suit the tastes of the most fastidious. Our

list includes only the most desirable ones. There are hundreds of varieties and kinds, many are meritorious, but for the average bed, group or border, one will find the selection that follows, suitable to ordinary purposes.

PLANTING SUGGESTIONS

Ordinarily perennials are set 18 inches apart for the larger-growing and 15 inches for the dwarf plants. In planting a border, if one will mark his rows going each way so as to make squares, the number of plants is quickly ascertained, the arrangement as to height is easily arrived at and the grouping or planting made easy by alternating or varying a few inches from these rigid lines. Mulching for winter protection is necessary, care must be taken not to smother the plants by covering the crowns.

May it be said that these plants thrive better in fertile ground, and with plenty of moisture; should be well cultivated and kept free of weeds for best results. For the sake of neatness, after the blooming period, the flower stems should in part be cut

out, being careful to leave sufficient foliage to conduct the natural functions of the plant.

PERENNIALS (Herbaceous)

ASTER—

***Blue Climax Aster**—Blooms September, October. Height 3 ft.

***White Climax Aster**—Blooms September, October. Height 4 ft.

***Tatarian Aster, (Aster tatarica)**—The tallest growing of the family. Much larger and more attractive foliage. Quite large flowers, blue to purple, September to November. Height 7 ft.

BABYSBREATH, (Gypsophila paniculata)—The mist-like bloom of white feathery flowers are excellent for trimming summer bouquets. Blooms July, August. Height 2 to 3 ft. Single variety only.

***BALLOONFLOWER, (Platycodon grandiflorum)**—A very hardy and adaptable plant for either sun or shade, with rather large, open, bell-shaped flowers. We deliver the blue variety, unless the white is ordered. Balloon-shaped ball just before the flowers open. June, September. Height 3 ft.

***BEEBALM, Oswego, (Monarda didyma)**—Sometimes called Bergmot; strong plants, succeeding in any soil or position, with aromatic foliage. Bright red flowers during July and August. Height 2 to 3 ft.

***BLEEDINGHEART, (Dicentra spectabilis)**—Large,



rosy-red heart-shaped flowers, clustered linearly along drooping stems. Must have partial shade. Blooms May, June. Height 2 ft.

BOLTONIA—

***White Bolton's** (*Boltonia asteroides*)—A tall perennial resembling wild aster, bearing thousands of white star-like flowers. Excellent for cutting. Blooms August, September. Height 4 to 5 ft.

***Violet Boltonia**, (*Boltonia latisquama*)—Same as above, except flowers are pink, tinged with lavender, and a little larger.

BUTTERFLYBUSH, (*Buddleia magnifica*)—This is the Oxeye Butterfly bush. We do not list this as a shrub because it dies down like a peony. It is advisable to bank a little dirt around it for winter protection. Showy, fragrant lilac purple flowers in late summer. While slow in starting, it attains a height of 5 to 6 ft. each season. Blooms July to September.

COLUMBINE—

American Columbine, (*Aquilegia canadensis*)—This is the wild honeysuckle of our woods. Scarlet intermingled with yellow. Thrives in sun or shade. Blooms May, June. Height 2 ft.

***Colorado Columbine** (*Aquilegia caerulea*)—Flowers deep blue and white, often tinged with lilac. Good for shady places. Blooms April to July. Height 18 inches.

Golden Columbine, (*Aquilegia chrysantha*)—Flowers bright golden yellow, 2 to 3 inches across, tinted claret at the tips. Fragrant. Blooms very early in April till August. Height 18 inches.



Shasta Daisies

Long-Spurred Columbine, (*Aquilegia c. hybrida*)—Very large flowers, in varying shades of blue, red, pink and yellow. Free flowering. Blooms April to July. Height 20 inches.

***COREOPSIS**, (*Coreopsis lanceolata grandiflora*)—Very attractive, rich, golden bloom on long stem. Fine for cut flowers. Blooms all summer, June to October. Height 20 inches.

CHRYSANTHEMUM, Common, (*Chrysanthemum hortorum*)

—The common *Chrysanthemum* listed here consists of the decorative and also the large flowering type. Large blooms may be produced by feeding with liquid manure when the buds appear and by pinching off most of the smaller buds on each stem. Blooms late and is often caught by frost in this locality. Height 2 to 3 ft.



Columbine

EARLY FLOWERING NAMED VARIETIES

Carrie Chrysanthemum—Large, golden yellow. (Decorative).

L'Argenteuillais Chrysanthemum—Large chestnut brown. (Decorative).

Oconta Chrysanthemum—Very large flower, white.

DAISIES—

***Giant Daisy**, (*Chrysanthemum nigrinosum*)—Large white flowers. Blooms August to October. Height 4 to 5 ft.

Painted Daisy, (*Chrysanthemum coccineum*)—Colors varying from deep red through all shades of pink to pure white. Order assorted colors. Feathery foliage. Excellent for cut flowers. Blooms June, July. Height 1 to 2 ft.

Shasta Daisy, (*Chrysanthemum Shasta*)—Very large flowers of pure white petals and yellow center. Excellent for cut flowers. Keep the flowers picked and they continue to bloom from June to September. Height 18 inches.

FERNS, Hardy—A northern strain, suitable for outdoor planting in shady location.

FOXGLOVE (*Digitalis purpurea*)—Flowers in large clustered spikes, ranging from deep purple to rose pink and white. Not hardy. A biennial but it re-seeds itself. June, July. Height 3 ft.

***GAILLARDIA** (*Gaillardia aristata*)—One of the showiest and most profuse bloomers. Flowers red and yellow mixture in large daisy-like flowers. Good cut flowers. Blooms all summer. June to October. Height 18 inches.



GAYFEATHER—

***Cattail Gayfeather**, (*Liatris pycnostachya*)—Also called **Kansas Gayfeather**. Unusual appearance. Beautiful as well as odd. A native of this section. It blooms in mid-summer and throws up long, narrow spikes of rich glossy purple flowers, which last a long time. Attracts butterflies. Good for winter decoration. Blooms July-August. Height 4 to 5 ft.

***Dwarf Gayfeather**, (*Liatris montana*)—Similar to preceding variety, only smaller in every way. Height 1 to 2 ft.

***GOLDENGLOW**, (*Rudbeckia*: **Golden Glow**)—Large, double, golden yellow flowers. Good for cutting, as the stems are long and the blooms are lasting. Blooms July, September. Height 5 to 6 ft.

GRASS—

Fountain Grass, (*Pennisetum ruppeli*)—A highly ornamental, tender grass, much prized for solitary garden specimens, or in masses. As a border for tall Cannas or Elephant's Ear, it is very appropriate and satisfactory. Plants attain three feet in height, with gracefully drooping bronze-green foliage, and upright purplish plumes. Although with heavy protection, it sometimes survives our winters, it cannot be depended upon as a hardy plant.

Ribbon Grass, (*Phalaris*: **Ribbon Grass**)—Variegated foliage. Very hardy. Used for bordering beds. Height 8 inches.

HOLLYHOCK, Double—Colors mixed. Height 4 to 6 ft.

IRIS—

German Iris, (**Bearded Iris**)—You can have blossoms from May to July by selecting early and late sorts. Also a variety of color of bloom. Plant 12 to 18 inches apart. S is standards, F is Falls.

Early

Sappho—S white, F white, blue edge reticulation. Height 2 ft.

Fairy—S F white, both delicately bordered with blue. Height 2 ft.

Helsea—S F creamy yellow. Height 2 ft.

Medium

Perfection—S light blue, F velvety black. Height 3 ft.

Honorabilis—S golden yellow, F mahogany brown. Height 2 ft.

Late

Speciosa—S dark lavender, F light purple. Height 2½ ft.

Conspicua—S creamish yellow, F reddish purple. Height 2 ft.

Violacea—S rich blue, F violet blue. Height 2½ ft.

Queen of May—S rose lilac, F almost pink. Height 2½ ft.

Baby Iris—A very neat, low growing Iris of clear blue. Earliest of all, blooming ten days to two weeks before any other Iris. Fine for edging and for rock gardens. April, May. Height 4 inches.

Blue Baby Iris (*Iris pumila caerulea*).

White Baby Iris (*Iris p. alba*).

Siberian Iris, Snow Queen—Foliage light and graceful. Flowers are of a snowy whiteness, large and well formed, produced in great abundance. A gem for flower border or water-side. Can be used for the margin of pools, where the soil is a trifle too damp for other flowers, but not with its roots in water, however. Blooms late May. Height 2 ft.

Superba—Similar to above. Large, violet blue flowers; handsome foliage.

Water Iris, Blueflag Iris, (*Iris versicolor*)—Can be planted directly in water. Is a familiar flower to most Americans, for what boy or girl has not had wet feet gathering it? Will also thrive in ordinary garden soil without a great quantity of water. Blooms late May. Height 2 ft.

***LARKSPUR**—The richest and deepest blue of the flower kingdom. Perfectly hardy in any sunny, well drained soil, where they can remain undisturbed for years. By cutting off the flowers when in full bloom, new ones will appear. Fine for cut flowers. Combines well with white phlox or Coreopsis.

Belladonna Larkspur, (*Delphinium*: **Belladonna**)

—An old favorite, with uniformly transparent sky-blue flowers. Blooms June to September. Height 4 ft.

Bellamosa Larkspur, (*Delphinium*: **Bellamosa**)—

Same habit of growth as above, but with flowers of deep blue color.

Chinese Blue Larkspur, (*Delph. grand. chinense*)

—A dwarf, blue, with fine feathery foliage.



Belladonna Larkspur



Tiger Lily

Chinese White Larkspur, (*Delphinium grand. alba*) — A dwarf, white, with fine feathery foliage.

LILLIES—

*Big plantainlily
Hosta plantaginifolia grandiflora) — Sometimes called Funkia instead of Hosta. Very large, pure white, lily-shaped; fragrant flowers in August and September. Its leaves are a glossy light green color and is grown mostly for its excellent foliage, which is produced in clumps. Height 2 ft.

Blue Plantainlily, (*Hosta caerulea*) — Broad green leaves; blue flowers in June. Ht. 1½ ft.

Tiger Lily (*Lilium tigrinum*)—Salmon red lily, covered with black, tiger-like spots. Blooms in August. Height 4 to 5 ft.

Tiptop Lily (*Lilium elegans*: Tiptop)—Very hardy, dwarf lilies, thriving in any garden and producing large, erect flowers of orange red, marked with black dots. Very showy planted in small groups. Bloom during June and July. Height 1½ to 2 ft. Plant bulbs 6 inches deep.

Lemon Daylily (*Hemerocallis flava*)—Sweet-scented, clear, full yellow. Flowers in June. Height 2½ ft.

Lily-of-the-Valley (*Convallaria majalis*)—Heavy dark green foliage. Prefers a cool, shaded corner. Sprays of drooping, pure white, wax-like, fragrant, bell-shaped flowers. Height 6 inches.

MALLOW MARVELS (*Hibiscus*: Mallow Marvels) —Habit of growth similar to Hollyhocks. Very large flowers, makes showy bloom. Colors are red, white and pink. Bloom July, September. Height 3 to 5 ft.

*MALTESE CROSS (*Lychnis chalcidonica*)—Heads of vivid scarlet flowers, resembling a cross. Blooms June, August. Height 2 to 3 ft.

*PEONIES—The "old red piney", that charming, old-fashioned flower, is hardly as popular as it was in days now past, because the new, lovely and more delicately tinted varieties, which have been recently introduced, are crowding their old relative into the background. The Peony is very hardy. The average height is from 2 to 4 feet, each plant spreading out to almost the same distance. Below is a list of good named varieties.

Red

Fulgida—Very good crimson purple.

Rubra Superba—Large, deep red, very late. Very fragrant.

Francois Ortegat—Large, deep crimson.

Felix Crousse—Large, compact. Deep rose red. Fragrant. Free bloomer; our darkest red.

White

Festiva Maxima—Very large. Pure white center, prominently flecked with crimson; outer petals sometimes faint lilac, white on first opening. Early. The most popular white.

Queen Victoria—The broad guard petals are a pretty bluish white, center slightly edged pink. Large.

Duchesse de Nemours—Pure white crown with sulphur-white center. No crimson flecks. Free bloomer. Early.

Pink

Umbellata Rosea—Light shell pink. Our earliest blooming Peony.

L'Esperance—Deep rose, with crinkly, white tip; extra large and fine. The earliest large pink.

Pink—Yellow Center

Philomele—Pink—Yellow center. Novel.

Unnamed Varieties—Red, white and pink.

PERENNIAL PEA, (*Lathyrus latifolius*)—Colors white, almost red and soft pink. Order assorted.

*PHLOX—Perennial Phlox can be used to advantage in the hardy border, in large groups on the lawn, or planted in front of shrub groups, where by judicious pinching back and removing faded flowers, a constant succession of bloom may be had until frost. Good for cutting.

NAMED VARIETIES—HARDY PHLOX

Pyramid—Symmetrical head, pure white, early and very hardy.

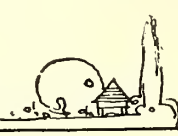
Bridesmaid—White, pink center. Excellent for cutting.

Rijnstroom — Bright crimson pink; immense flowers.

R. B. Struthers—Cherry red, suffused with salmon.



Festiva Maxima



Unnamed Phlox—Red, white and pink.

WILD PHLOX, Blue Phlox, (Phlox divaricata)—Also called Wild Sweet William. Very fragrant lavender flowers. Moist, rich soil, in sun or shade. Good for rock and wild gardens. Blooms in May. Height 12 inches.

PINKS—

***Grass Pink, (Dianthus plumarius)**—Also called Scotch Pink. The single and double flowers have fringed or jagged petals and are very fragrant. The colors range from white to bright scarlet, and are very dainty, growing above a dense tuft of gray-green, grass-like leaves. Excellent for perennial bed edging. Good for cutting. Bloom middle of May till 1st of July. Height 12 inches.

Double Cluster Pink, (Dianthus latifolius)—Sometimes called the everblooming Sweet William. Is much like a Caranation. Has intense crimson double flowers. Good for edging; good for cutting. Bloom all summer, May to October. Height 12 inches.

Sweet William, (Dianthus barbatus)—An old garden favorite and popular at the present day. The flowers are arranged in clusters, and those which are ringed and spotted are very novel. The color scheme ranges from purest white to blackish red, with an infinite number of variations and combinations of colors. Blooms June, July. Height 18 inches.

SEA-LAVENDER, Bigleaf, (Limonium latifolium)—Sometimes listed *Statice latifolia*. Splendid for garden or rockery, producing panicles of tiny purplish blue flowers, which can be dried for winter bouquets. Bloom July, August. Height 2 ft.

SPEEDWELL, (Veronica)—When Christ was laboring beneath the heavy cross, He faltered, and a maiden, St. Veronica, rushed forward to wipe the perspiration from His brow. The impress of His face was found upon her napkin. Such is the story of St. Veronica, and because the markings of some species of Veronica resemble a face, this flower was named after St. Ver-



Phlox

onica. It is a pretty story and one we recall when looking at this flower. Good for the border and rock garden. The most showy sort is the following:

Speedwell, Clump, (Veronica longifolia subseilis)—Perhaps one of the most attractive of blue-violet flowers for the border. Long spikes of blue flowers. July to September. Height 2 ft.

STONECROP—

***Showy Stonecrop, (Sedum spectabile)**—Also called Liveforever. Thick, light green leaves, nearly evergreen. Flat cymes of rosy purple flowers. Blooms August, September. Height 15 inches.

Purple Showy Stonecrop, (Sedum spec. atropurpureum)—Same as above, except bloom is almost red.

Running Stonecrop, (Sedum Stoloniferum)—Pink or white flowers. Trailing.

YARROW—

***Pearl Yarrow, (Achillea Pearl)**—Double flowers in small round snow-white balls, profusely borne on branching leafy stems, forming a mass of flowers. Fine for cutting. Blooms all summer. Height 1½ ft.

***Pink Yarrow, (Achillea millefolium rosea)**—The same as above, only flowers are pink.

***YUCCA, Common, (Yucca filamentosa)**—Stiff, broad, sword-shaped leaves. Remarkably drought-resistant. Place in front of shrubbery. White flowers in June, July. Height 3 to 5 ft.

WINTER CARE OF PERENNIALS

See that no water stands about the crowns, but that the ground should be fairly moist about the roots, before it freezes solidly for winter. A light covering of strawy manure or coarse litter of any kind is advisable with most perennial plants. Be careful not to use a fine material that will pack down closely over the crown. Leaves are not desirable unless brush or coarse litter is applied first. The protection is best applied after the ground is frozen, say December 1st, and should be removed as soon as growth has started generally, or about the 1st to 15th of April.

Most people do not give any covering to the hardy perennial plants, but to be on the safe side one year with another, it is advisable to give them a light covering.



Yucca

CONSULT OUR LANDSCAPE DEPARTMENT



See
Page 5
for
Details



SUMMER FLOWERING BULBS and ROOTS

UNDER this heading will be listed many tender varieties of plants, such as Cannas, Dahlias, Gladiolas, etc., that will have to be taken up in fall after frost comes and stored in the basement where they will not freeze and be replanted in spring. However much one may dislike to do this, we cannot dispense with the Canna, which is so widely used for its tropical, decorative effect; with the Dahlia, which furnishes us with such a profusion of bloom from August until frost, or with the beautiful summer flowering Gladiola, so valuable for its generous supply of cut flowers, which, when cut in bud, will last ten days in the house.

Roots should be taken up before fall freezes and kept in a cool, dry cellar. Plant 4 to 6 inches deep late in April or early part of May.

CANNAS

DAVID HARUM—3½ feet, bronze foliage, flowers fiery reddish orange.

KING HUMBERT—The grandest Canna ever offered. Large leaves of purple madder brown over bronze, crowned with immense heads of Orchid-like flowers, velvety orange-scarlet flecked carmine. A combination of leaf and blossom incomparably beautiful. Height 4 to 4½ ft.

***THE PRESIDENT**—4 ft. Flowers are immense; round, firm, often 7 inches across, of extra good quality and borne in the greatest profusion. The color is unfading, pure, glowing, scarlet; foliage, rich green.

PRESIDENT MCKINLEY—2 to 3 ft. For outside row, green foliage, flowers crimson, shaded scarlet.

RICHARD WALLACE—4 ft. Green foliage, canary yellow flowers. God variety.

CACTUS DAHLIAS

COUNTESS OF LONSDALE—A peculiar but pleasing blending of salmon-pink and amber, a color difficult to describe. This is the Dahlia for the millions. Flowers freely under all conditions.

PINK PEARL—Full, perfect form, with blunt quills, slightly waved. Lilac pink, with lighter tips and aureole; button center of deep rose.

PRINCE OF YELLOWS—Pure saffron yellow, perfect form, and liberal in its bloom during an opportune season.

ICEBURG—Ivory white.

GEN. BULLER—Cardinal-red, each petal tipped with white.

J. H. JACKSON—Brilliant crimson-maroon; very free.

DECORATIVE DAHLIAS

A. D. LIVONI—Beautiful clear pink, of perfect form and very free.

CATHERINE DUER—Iridescent red; a favorite for cutting.

GRAND DUKE ALEXIS—Large, massive flowers, ivory-white, with a faint tinge of rose at the extremities of the petals.

JACK ROSE—Brilliant crimson red, rich and glowing, similar in shade to the popular "Jack" rose, which suggested its name.



Gladioli

The habit of the plant is perfect for garden decoration, while its stiff stems, holding the large flowers erect, secure for it a foremost place as a high colored cut flower.

QUEEN WILHELMINA—Immense, fluffy flower of pure white, with yellow center.

ZULU—Deep maroon, with black shadings.

GLADIOLI

AUGUSTA—A beautiful white variety, with lavender anthers. Strong spike, often having two or three branches.

AMERICA—Beautiful, soft flesh-pink, faintly tinged with lavender. A magnificent cut-flower.

BARON HULOT—One of the finest blue Gladioli. A deep violet blue, with well-opened flowers.

CRACKER JACK—Dark rich velvety maroon, with blotches of yellow on lower petals.

KLONDYKE—A clear yellow, with a vivid crimson, maroon blotch in the throat, a splendid free grower.

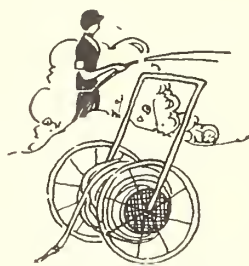
MRS. FRANK PENDLETON—Bright rose pink on a pure white ground. A giant blotch of richest carmine red on lower petals. No grander variety in existence.

MRS. FRANCIS KING—A striking shade of light scarlet or flame color; one of the most effective both in the border and when cut.

ROBERT BROOMFIELD—Pure white, large flowers; very free.



Dahlias are ideal for Cut Flower purposes



QUICK REFERENCE LIST OF PERENNIALS FOR SPECIAL PURPOSES

DWARF

Less Than 1 Ft.

Baby Iris
Ribbon Grass
Grass Pink
D. C. Pink
Stonecrop
Lily-of-the-Valley

LOW

1 to 2 Ft.

Beebalm
Bleedingheart
Columbine
Coreopsis
Painted Daisy
Shasta Daisy
Gaillardia
Dwarf Gayfeather
Iris in Var.
Plantainlily
Tiptop Lily
Sweet William
Sea Lavender
Yarrow

MEDIUM

2 to 3 Ft.

Babysbreath
Balloonflower
Chrysanthemum
Hardy Ferns
Iris in Var.
Fountain Grass
Chinese Larkspur
Lemon Daylily
Maltese Cross
Peonies in Var.
Phlox in Var.

TALL

3 Ft. and Up

Asters
Boltonia
Butterflybush
Giant Daisy
Cattail Gayfeather
Goldenglow
Foxglove
Iris in Var.

Belladonna-Larkspur
Bellamosa-Larkspur
Tiger Lily
Mallow Marvels
Yucca
Hollyhocks

Twelve Leading Perennials for Cut-flowers

Babysbreath
Columbine
Coreopsis
Daisies
Gaillardia
Gayfeather
Iris
Larkspur
Pinks
Peonies
Phlox
Yarrow

Some Perennials Suited to Shade or Partial Shade

Balloonflower
Beebalm
Bleedingheart
Columbine
Iris
Larkspur
Lemon Lily
Lily-of-the-Valley
Plantainlily

Blue Flowering Perennials

Colorado Columbine
Gayfeather
Iris in Var.
Blue Plantainlily
Sea-Lavender
Balloonflower
Larkspur in Var.

White Flowering Perennials

Shasta Daisy
Giant Daisy
Snow Queen Iris
Big Plantainlily
Lily-of-the-Valley
Pearl Yarrow

Babysbreath
White Chinese Larkspur
Peonies in Var.
Asters in Var.
Yucca
Phlox in Var.

Pink Flowering Perennials

Bleedingheart
Grass Pink
Stonecrop
Peonies in Var.
Phlox in Var.
Pink Boltonia
Hollyhocks

Red Flowering Perennials

Beebalm
Peonies in Var.
Phlox in Var.
Double Cluster Pink
Maltese Cross
Red Mallow Marvel

Yellow Flowering Perennials

Columbine
Gaillardia
Coreopsis
Lemon Daylily
Golden Glow

Plants Suitable for Rock Gardens

Columbine
Balloonflower
Pinks
Speedwell
Stonecrop
Yarrow
Baby Iris
Yucca
Gayfeather

Biennials Which Re-seed Themselves

Hollyhock
Foxglove
Columbine
Sweet William



TREES for SHADE and BEAUTY



THE many ways in which Deciduous Trees are used make them among the most important productions of the modern nursery. There is growing constantly a deeper appreciation of trees, and more people know them and love them than ever before in

the history of the country. Greater attention than ever is being paid to the trees along the city's streets, and it is well recognized that shade and shelter trees around the farm home not only add to its beauty and comfort, but greatly increase the value of the property.

The trees we offer in the following list are all thrifty, vigorous specimens which have, by cultivation, been encouraged to grow great quantities of fibrous roots, so essential to successful transplanting.

(*) indicates most hardy kinds.

PLANTING SUGGESTIONS—Plan to plant permanent trees 40 feet apart and those not so robust at 30 feet. Where quick growing trees are interplanted 20 or 25 feet is suggested. Also there is a list on page 26, for the convenience of those who are in doubt of what to use.

Be sure to plant 4 to 6 inches deeper than stood in nursery rows..

Be very sure to prune all shade trees at time of planting. This should consist of shortening the side branches, taking off generally the last season's growth or more. We prefer not to dehorn the tops but rather shorten the central leader in proportion to the pruning done on the side branches. Avoid making crotches if possible, as trees later may break under ice or wind. We strongly recommend

wrapping the bodies of all trees with some protective material like burlap, paper, etc.

***APPLE, Anoka**—Can be used in landscape plantings. See Apples for description.

ARALIA, Devils-Walkingstick, (*Aralia spinosa*)—White flowers in July. Planted for tropical effect or for height in groups. Height 15 ft.

ASH, Green, (*Fraxinus lanceolata*)—A medium grower and valuable for planting in the streets or in parks. Does well for windbreak.

BIRCH—

***European White Birch, (*Betula alba*)**—Tree has white bark, but this variety does not weep. Good for planting in clumps near water edge.

***Cutleaf Weeping Birch**—An elegant, erect tree, with slender, drooping branches and fine cut leaves. White bark.

BOXELDER, (*Acer negundo*)—Used for shade and windbreak.

CATALPA—

Western Catalpa, (*Catalpa speciosa*)—Valuable for timber, fence posts, etc. Ornamental and valuable tree where hardy. Best suited to rich, moist soil in Iowa and eastern half of Nebraska.

Umbrella Catalpa, (*Catalpa: Umbrella*)—Botanical name has been listed *Catalpa bungei*. Foliage large and glossy. Top-grafted on tall stems, it forms a perfect umbrella-shaped head and makes an effective tree for formal planting.

CHERRY, Wild, Black, (*Prunus serotina*)—Upright and round-headed. Slender, glossy leaves. Hardy.

***CHOKECHERRY, Common, (*Prunus virginiana*)**—Used in park and roadside groups.



The beautiful flowers of the Hopa Crab

CRAB—

Bechtel Crab, (*Malus ioensis plena*)—Double flowering Crab. Large, pink, double, highly fragrant flowers. Green fruit. Height 10 to 20 ft.

***Hopa Crab, (*Malus: Hopa*)**—Prof. N. E. Hansen variety. New flowering crab, with good foliage, red bud, with beautiful rose colored blossoms. It is a cross of *Malus niedzwetzkyana*, a red-fleshed, red-flowering apple from Turkestan, and the Redvein Siberian Crab. The dark-reddish colored bark and foliage are in their way as beautifying as the rose-colored blossom. The color of the leaves and bark live up the landscape and give it a cheerful aspect thruout the year, the foliage for summer color and the reddish colored bark for winter scenery. Plant with tall growing shrubs or as a specimen tree. Height 15 to 20 ft. Very hardy.

Whitney Crab, (*Malus: Whitney*)—This orchard tree can be used in shrubbery borders.

ELM—

***American Elm, (*Ulmus americana*)**—Sometimes called White Elm. A noble spreading and drooping tree, suitable for shade and excellent for streets and drives.

***Moline Elm, (*Ulmus: Moline*)**—This is a new tree. Foliage similar to the American Elm, only somewhat larger. Bark is smooth and glossy. Trees grow more compact. Propagated by budding, so all Moline are uniform in shape.

In great demand as a street tree.

***HACKBERRY, (*Celtis occidentalis*)**—Resembles Elm somewhat; foliage more pointed and a brighter glossy green; bark thick and rough; a symmetrical grower. Especially suited to dry soils.

HAWTHORNE—

Downy Hawthorne, (*Crataegus mollis*)—The spirit of the prairie is reflected in the horizontally spreading branches. The Red Haw that grows native along the rivers of Iowa and eastern Nebraska. Height 15 ft.

Thicket Hawthorne, (*Crataegus coccinea*)—Sometimes called Scarlet Haw. Young foliage tinged red, scarlet and orange in fall. Large crimson fruit; close, shrubby growth; very compact, round head; a great profusion of single white flowers in early spring. Height 15 ft.

HONEYLOCUST—

***Common Honeylocust, (*Gleditsia triacanthos*)**—Forms a tall, round topped tree of uncommon airiness because of its small leaflets. Very thorny.

***Thornless Honeylocust, (*G. tri. inermis*)**—Same as above, but almost thornless.

***LILAC, Peking, (*Syringa pekinensis*)**—White flowered small tree. Used for height in shrubbery borders. Height 15 ft.

LINDEN, American, (*Tilia americana*)—A rapid growing, large sized tree, with a remarkably straight trunk; deep green heart-shaped leaves, and clusters of fragrant yellow flowers. Is splendid for lawn and street planting.

MAPLE—

Silver Maple, (*Acer dasycarpum*)—Should not be confused with Silver Poplar. This is our common soft Maple. Rapid grower.

Blair Maple, (*Acer: Blair*)—A type of the common Maple perpetuated by budding. More upright habit of growth. Original tree growing at Blair, Neb.



A Block of Elms ready for digging



Norway Maple, (*Acer platanoides*)—A hardwood tree which resembles the Sugar Maple in appearance. It is very symmetrical, with a round, dense head and dark green foliage. Makes a beautiful shade or street tree. Grows slower than Silver Maple.

Schwedler Maple, (*A. plat. schwedleri*)—The Purple Norway Maple's beautiful leaves attract attention at all seasons, but are especially fine in spring, when their gleaming red and purple leaves contrast brightly with the delicate green of other trees. In midsummer they are purplish green, in autumn golden yellow.

Sugar Maple, (*Acer saccharum*)—Hard Maple, Iowa type. A beautiful, stately tree. A desirable shade tree where it does well.

***MOUNTAIN-ASH, European, (*Sorbus aucuparia*)**—It is ornamental all through the season. Its compound pinnate foliage is soft and handsome in appearance and of a fine shade of green. Large flat heads of pure white flowers in June, followed by clusters of bright orange and red fruits, which remain long after the frost. Height 20 to 30 ft.

MULBERRY—

***Russian Mulberry, (*Morus tatarica*)**—Valuable for hedges and windbreaks around orchards and fruit plantations, as it bears every year, ripening constantly nearly all summer, thus feeding the birds. Makes a rapid growth and is considered very good for posts.

Weeping Mulberry—A hardy tree, forming a perfect umbrella-shaped head.

OAK—

Pin Oak, (*Quercus palustris*)—Pyramidal in habit with stiff, horizontal branches. Easiest oak to transplant, grows faster than most other oaks. Leaves deep green, glossy, fully divided, turning handsome orange scarlet in fall.

Red Oak, (*Quercus rubra*)—A handsome tree,

with wide spreading branches. Attractive bronze and red foliage in fall.

OLIVE—See Russian-Olive.

PLANETREE, American, (*Platanus occidentalis*)—Also called Sycamore. Do not recommend planting on account of blight.

PLUM—

Flowering Plum, (*Prunus triloba*)—Low, bushy, shrub-like tree, producing pink, double flowers.

***Toka Plum, (*Prunus: Toka*)**—An upright growing tree for the shrubbery border, whereby one can have a pretty plum bloom as well as one of our best garden plums for use.

POPLAR—

***Norway Poplar, (*Populus: Norway*)**—Our quickest growing shade tree. Green leaves similar to Cottonwood. Used considerably for quick effect along with slower growing trees. Grows in any soil, and very hardy.

***Volga Poplar, (*Populus: Volga*)**—Similar to the Lombardy Poplar, but better for this section. The tree grows upright and is used for bold high points in a planting and together for screen purposes. Approximate limb spread six to eight feet; height 20 to 30 feet.

***Silver Poplar, (*Populus alba*)**—Leaves are dark on upper side and pure white on lower side. Leaves resemble Maple and this tree is often incorrectly called Silver Maple. Drought resistant and used considerably in western Nebraska.

Bolleana Poplar, (*Populus alba bolleana*)—Leaves similar to Silver Poplar and habit of growth similar to Volga Poplar.

REDBUD, American, (*Cercis canadensis*)—Pink, pea-shaped blossoms before the leaves unfold. Should be placed in protected position. Not very reliable.

—Trees Continued on Page 28.

WINDBREAKS for PROTECTION



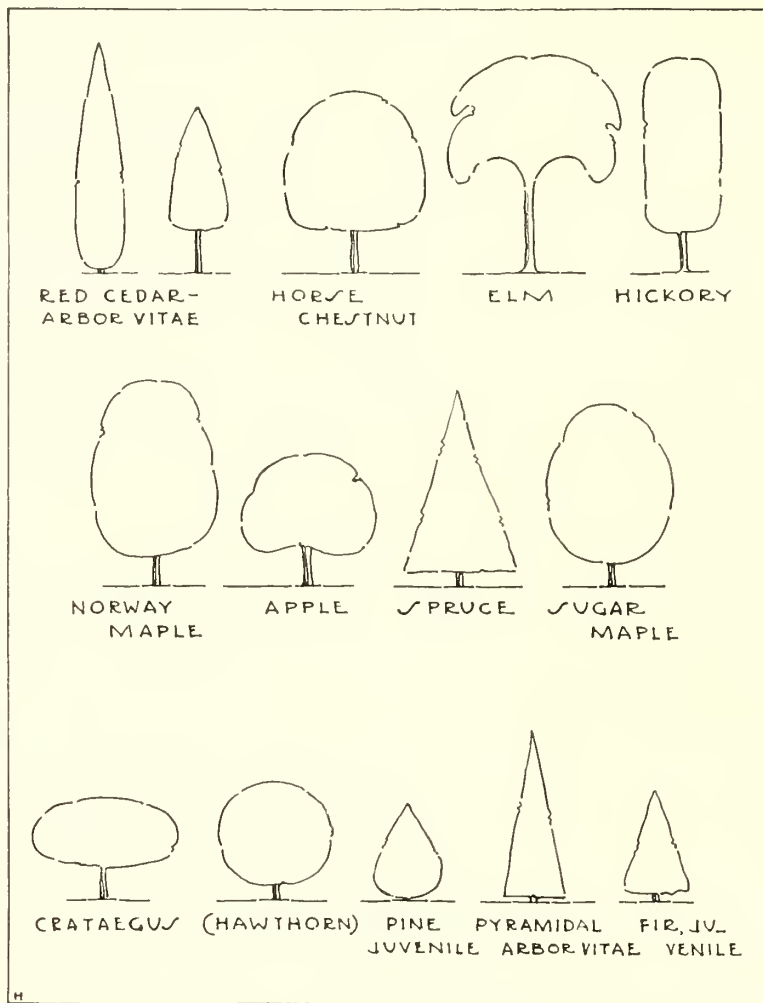
An Effective Spruce Windbreak

way Poplar is the tree that leads them all in rapid upward growth. Russian-Olive is very hardy and makes an excellent low windbreak.

Two rows of evergreens properly arranged will shut out the wind better than six rows of other trees. This is especially true in winter when the windbreak is needed most. Bull Pines will grow and thrive in the most severe locations, as well as Black Hills and Colorado Spruce, which are slower in growth. Scotch and Austrian Pine will thrive over the greater part of Nebraska and eastern South Dakota. These will make an average growth of 2 ft. a year if given good care.

THERE are many places throughout the Northwest where belt planting of trees is very desirable, to afford protection to the home orchard, farm and yard. Such plantings will also furnish fire wood—a point in many instances worthy of consideration. With land still plentiful it is doubtful if two or more acres can be put to better use than providing a shelter for the home and all the stock and farm buildings, in a climate where winds below the freezing point are blowing nearly half the year. The trimmings from a good sized grove will furnish a good supply of the best summer wood, poles, posts, and timber for various uses that will always be convenient to have at hand.

For dry soils and on the Western prairies plant a good proportion of Ash. The American Elm is almost equal in hardiness but not of so much use for timber. In moist soils the Soft Maple is a good tree, especially valuable for firewood. On the dry Western prairies the Laurel Leafed Willow is the most popular. The Russian Golden Willow is also very popular. The Nor-



HOW TO SELECT TREES

We believe that the accompanying chart of typical tree forms will interest you. Have you ever thought about the amazing consistency of Nature in grouping these shapes? And have you ever thought about the difference in effect different trees will make near a house?

In choosing trees for a home, study the house. If it's high and seems to stick up in the air too much, plant a tree that will tower and spread over it, or else one that will shoot up tall and narrow and make it seem lower by opposition to its horizontal lines, such as the eaves. If it's a low house, it can be made to hug the ground or rise higher as seems best by placing the right tree.

Women are pretty good judges of such things. They eternally study just such problems in clothes and hats.

LIST OF TREES FOR ALL PURPOSES

For Street or Avenue Planting

Elm
Moline Elm
Linden
Maples

Weeping Trees

Weeping Mulberry
Cut-leaved Weeping Birch
Weeping Willow

Trees for Quick Effect

Catalpa
Silver Maple
Mulberry
Poplar
Willow
Boxelder

Trees That Flower

Catalpa
Red Bud
Linden
Crab Apple
Flum
Peking Lilac

Trees for Winter Beauty

Birch
Golden Willow
Evergreens

Trees With Attractive Autumn Foliage

Sugar Maple
Oaks

For Moist Places

Birch
Willow
Poplar
Oaks
Linden
Elm
Ash

For Dry Places

Junipers
Mugho Pine
Elm
Ash
Locust
Russian-Olive
Hackberry



All Evergreens aren't Pines—The Photograph above shows four of the most common classes.
1—Spruce. 2—Pine. 3—Cedar. 4—Arborvitae

EVERGREENS

THE Evergreens are indispensable in some features of ornamental gardening. They are especially valuable for screens and wind-breaks, for a background against which to group trees with beautifully colored leaves or branches, and for winter decoration. In fact, in the northern states the Pines, Spruces and other native Evergreens are so well adapted to the climate and soil, that they are quite as important in all branches of ornamental planting as deciduous trees and shrubs.

Evergreens are also very valuable for wind-breaks. One or two rows about the building site will cut off the winds almost completely, and move your home a considerable distance south by making it warmer in fact, and by suggestions of warmth from their green color when everything else about the home appears dull and cold.

(*) Indicate most hardy varieties.

ARBORVITAE

American Arborvitae, (*Thuja occidentalis*)—Pyramidal form and very dense from the ground up.

American Globe Arborvitae, (*T. occ. globosa*)—Round, compact form and dense foliage. Dwarf.

American Pyramidal Arborvitae, (*T. occ. pyramidalis*)—Columnar habit of growth. Semi-hardy.

Oriental Pyramidal Arborvitae, (*T. orientalis pyramidalis*)—A pyramidal Chinese variety.

FIR

Balsam Fir, (*Abies balsamea*) — Ornamental. Grows 50 ft. or more in height, with a spread of branches 12 to 18 ft.

Douglas Fir, (*Pseudotsuga douglasii*)—Ornamen-

tal. Grows 60 ft. or more in height, with a spread of branches 12 to 18 ft.

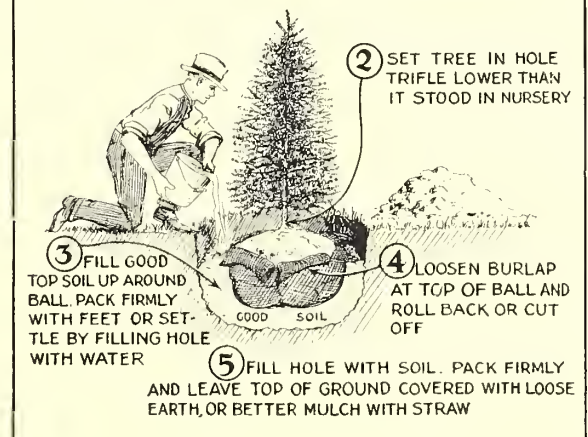
*JUNIPER

*Colorado Juniper, (*Juniperus scopulorum*)—Also called Colorado Silver Cedar. Upright.

*Pfitzer Juniper, (*Juniperus: Pfitzer*) — Semi-dwarf. Spreading horizontal effect; 8 to 10 ft. high and wide.

*Redcedar Juniper, (*Juniperus virginiana*) — This is the well known native tree so much appreciated where the softness in appearance is re-

HOW TO PLANT EVERGREENS





quired in the landscape effect. Very hardy. Do not recommend for windbreak on account of the cedar rust fungus which develops upon it, and which is injurious to apple foliage. Should be planted sparingly only where rust can be kept under control. 20 to 30 ft.

***Savin Juniper**, (*Juniperus sabina*)—Spreading fan shape habit of growth. Hardy; 3 to 5 ft. high and wide.

*PINE

***Austrian Pine**, (*Pinus nigra*)—A valuable evergreen for windbreak and lawn planting. A large growing tree.

***Jack Pine**, (*Pinus banksiana*)—Easily transplanted; drought-resistant; used in sandhill country for windbreaks.

***Mugho Pine**, (*Pinus mughus*)—Very dwarf in habit, producing a unique ball-like form that is much admired. Used considerably in landscape plantings. It never grows over 4 to 5 ft. tall, but spreads out 6 or more ft. in diameter when full grown.

***Scotch Pine**, (*Pinus sylvestris*)—Used for windbreaks. Hardy in Iowa and eastern half of Nebraska.

***Western Yellow Pine**, (*Pinus ponderosa*)—Sometimes called Bull Pine on account of the heavy, massive needles which are from 6 to 10 inches long, of deep green color on the surface and bluish white underneath. It is an extremely handsome ornamental tree, very drought-resistant, and hardy. Grows tall and upright, of well rounded pyramidal shape. A very desirable evergreen for western Nebraska windbreaks.

*SPRUCE

***Alberta Spruce**, (*Picea canadensis albertiana*)—Also known as Black Hill Spruce. Very compact even when small. The foliage varies from a delicate bluish tint to deep green, and all trees are remarkable for their bright fresh color. One of our best evergreens and used in most any place an evergreen can be used. Naturally adapted to dry weather and high altitudes. We are large growers of this variety and are shipping them over a wide territory. When fully matured it reaches 25 to 40 ft. in height and requires 10 to 12 ft. for spread of branches.

***Globe Alberta Spruce**—The variety listed above trimmed in ball shape. Excellent for many locations.

***Colorado Spruce**, (*Picea pungens*)—This beautiful tree, a native of Colorado, is hardy thruout the West. It varies in color from silver blue to dark green. The blue type is next described.

***Blue Colorado Spruce**, (*Picea pungens glauca*)—This is our selected "shiner" blue spruce. It has created a sensation thruout the country as an outstanding ornamental tree. Very symmetrical, with horizontal layers of branches covered with short silvery blue needles. One of the finest of ornamental evergreens and hardy anywhere.

Norway Spruce, (*Picea excelsa*)—A lofty, ele-



Red Cedar

gant tree, of perfect pyramidal habit, and as it gets age, has fine, graceful, pendulous branches. Fine for ornamental windbreak purposes in Eastern Nebraska and Iowa. Fast grower.

TREES

(Continued from Page 25)

***RUSSIAN-OLIVE**, (*Elaeagnus angustifolia*)—An ornamental tree of special value; attains a height of 30 feet or more; bark and leaves light green when young; bark becomes darker as the tree grows older, and the leaves more silvery white; it blooms profusely in June in small racemes, color of flower yellow. Fragrant, an excellent tree for semi-arid districts. Is used considerably for windbreak.

SYCAMORE—See Planetree.

***WALNUT**, Black, (*Juglans nigra*)—Has great economic value. Good lawn tree. Our best nut producer.

WILLOW—

***Golden Willow**, (*Salix vitellina*)—Its brilliant yellow twigs show up much in winter. Used for windbreaks.

***Laurel Willow**, (*Salix pentandra*)—One of the best willows for ornamental planting.

Leaves large, glossy, green. Also used for windbreaks. Very hardy.

***Niobe Willow**, (*Salix: Niobe*)—Our hardest weeping willow. Has attractive yellow twigs for winter effect.

Wisconsin Weeping Willow, (*Salix blanda*)—Very graceful drooping willow. Hardy in Iowa and eastern Nebraska.



A Group of Colorado Blue Spruce



FRUIT DEPARTMENT



IN the propagation of nursery stock, there is no questioning the truth of the old adage—"Experience is the best teacher."

The result of years of study and practice in this locality places us in a position to know beyond a question of doubt the varieties which thrive best under the climatic and soil conditions of the territory we serve. There are literally hundreds of orchards today which bear out the truth of this statement.

In this handbook will be found only those varieties which have been thoroughly tried, tested and found reliable and satisfactory in every respect. Everything offered you in this handbook has our hearty endorsement.

On every farm there are suitable locations for orchards. Ground now idle may be made to yield a profit, and at a very small initial expense.

The trees you buy from us are guaranteed to come from the strongest, most vigorous stock, and, with reasonable care, you are certain of a full measure of success.

CARE OF STOCK

The bundles should be opened immediately, the roots dipped in water, then heeled in moist ground, so that the mellow earth will come in contact with the roots and thoroughly protect them from the air, having the earth tramped solid about them.

The ground should be carefully prepared by deep plowing and firming down with a disc and harrow.

PLANTING FRUIT TREES

The holes for planting must be large enough to receive the roots freely, without cramping or bending them from their natural position. All broken or mutilated portions of the roots must be cut off so as to leave the ends smooth and sound. All trees should be planted two or three inches deeper than they stood in the nursery row; pack the soil very firmly about the roots by tamping with the feet or post tamper, being careful not to bark or break the roots. Leave three inches of the surface soil loose to serve as a mulch. If the ground is very dry apply one or two pails of water before this soil mulch is in place, and after the water has soaked away it can then be placed over the moist soil.

TRIMMING BACK

Cut back top of tree from one-quarter to one-half, according to the number of roots left. On two or three year old trees remove all branches except the three or four which you select to form the frame work of the tree. Shorten these a third or more.

Try not to leave two branches nearly opposite; they will form a bad crotch when the tree is older. (See illustration).

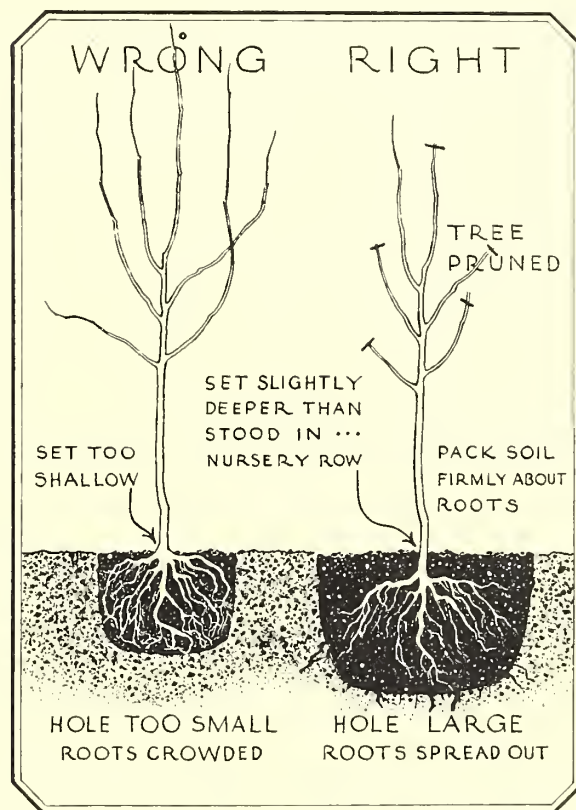
Apricots, peaches and all other one year old trees may be trimmed to a whip and cut back to the height at which the uppermost frame work limb should start.

HOW TO ASCERTAIN NUMBER OF TREES AND PLANTS ON AN ACRE

To ascertain the number of plants required to the acre at any given distance, divide the number of square feet (43,560) in an acre by the number of square feet you desire to devote to each plant. For instance, in strawberries planted $1\frac{1}{2}$ by 4 feet each hill will occupy 6 square feet, making 7260 plants to the acre.

A Few Distances Worked Out

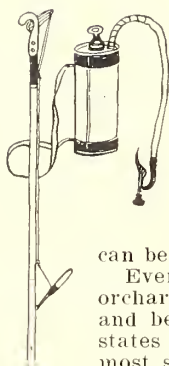
2 feet each way	10,790	12 feet each way	302
3 feet each way	4,850	15 feet each way	194
4 feet each way	2,723	18 feet each way	135
5 feet each way	1,742	20 feet each way	110
6 feet each way	1,210	24 feet each way	71
8 feet each way	680	32 feet each way	40
10 feet each way	430		



Note:—All trees should be planted 2 or 3 inches deeper than they stood in nursery rows.



APPLES YIELD PROFITABLE RETURNS



THE Apple is the first fruit, both in importance and general culture. No fruit is more in demand, more universally liked or more generally used. The earlier varieties ripen about the last of June, and the later sorts can be kept until that season. It is a fruit in perfection the entire year. By a judicious selection of varieties, a constant succession can be had the whole year.

Every farm home should have a family orchard. The hardier varieties will thrive and bear fruit in Nebraska and adjoining states even where climatic conditions are most severe. No farm home plan is complete or desirable without its quota of apple trees. Twenty-five to fifty trees occupy only a portion of an acre of ground and will furnish the family with an ample supply, one year with another.

Commercial apple growing is very profitable in the more favored sections of the territory. The rolling land adjacent to the Missouri river (one to two tiers of counties from the river), is particularly adapted for commercial orcharding.

We have cut down our list of varieties and are growing and offering only such sorts as have been thoroughly tested. The varieties that are really valuable in the Central West are described quite fully, while those of less value are described more briefly.

(*) The very hardiest varieties are marked with an asterisk. Keep these in mind when making selections for the North and West, where climate is severe and rainfall light.

Plant 25 to 35 ft. apart.

For planting instructions, see page 29.

SUMMER APPLES

***ANOKA APPLE**—New dwarf variety, fully as good as Duchess. Fruit large, ripening in August.

Splendid for cooking. Can be planted in the small yard. Attractive bloom. Very hardy. A Prof. Hansen variety. Bears second year. Height 10 to 15 ft.

***LIVLAND** (Livland Raspberry)—This variety is quite new but is very promising. It is of Russian origin and is undoubtedly one of the very hardiest. It has been planted quite extensively in the Dakotas and Western Minnesota during the past few years and seems thoroughly at home. It is one of the earliest to ripen, usually being at its best in late July. The fruit is medium to large, splashed and shaded with red; flesh stained with red, fine, tender, juicy and slightly tart;



Wealthy Apple



extra good and very beautiful. It is a fine dessert apple and makes excellent sauce, pies and jelly. Bears young.

***OLDENBURG (Duchess)**—This apple is too well known to need description to most planters. It is of Russian origin and one of the hardiest. It adapts itself to a wide range of territory and is a favorite early commercial variety in almost every northern apple section. The tree is one of the best, with upright head, requiring little pruning. Fruit is large, striped and beautiful, ripening in August, but makes excellent sauce and pies as early as July, when only half matured. It contains too much acid to be a good eating apple, but should be in every home orchard for cooking. It finds a ready sale on all large markets and on account of it being suitable for use so early, it always brings a good price. A good annual bearer. Bears young.

***YELLOW TRANSPARENT**—A favorite home and commercial variety, especially in the North. Tree very hardy; an early and annual bearer. Fruit is large, pale waxen yellow, beautiful. Flesh white, tender, fine grained, of splendid quality. It is a favorite early dessert apple and is also suitable for cooking. Season July 15 to 20th. Should have a place in every home orchard.

CHENANGO (Strawberry)—Fruit medium size, oblong; skin whitish, splashed and mottled with crimson. Flesh tender and fine grained, juicy and mild. A splendid table apple. Tree moderately hardy and good annual bearer.

EARLY HARVEST—Early yellow apple. Quality good. July.

RED JUNE—Small to medium. Good quality. Heavy bearer. June to July.

SWEET JUNE—Small to medium. Good quality; sweet. June and July.

FALL APPLES

***WEALTHY**—Fruit large, variegated red, beautiful; full of lively, sub-acid juice; fine grained; splendid for eating; unsurpassed for cooking, jelly, drying or butter; a native of Minnesota; an early winter apple there, and one of their hardiest sorts; it is indispensable in the new Northwest; does remarkably through all the Central States and is a favorite wherever grown. Commences to bear young and is a heavy annual bearer. This variety should be in every orchard, family or commercial. September.

***HIBERNAL**—One of the hardiest of Russian varieties adopted by many prominent horticulturists as a standard of hardiness. Tree vigorous, sturdy and a good early bearer. Fruit large to very large, greenish-yellow, with dull bronze red on sunny side; flesh tart, juicy, very good for sauce, baking and jelly. This is one of the iron-clads for sections of extreme cold and semi-arid climates. October to December.

BELL—This variety is from a chance seedling found growing at Papillion, Nebraska, and has been tested out on our grounds for 22 years. It has proven itself perfectly hardy on our grounds. The tree resembles Jonathan and this with its quality indicates that it is a Jonathan seedling. The fruit is medium size, oblong; skin is deep red to

almost black on sunny side; flesh is fine grained, juicy and mild. The quality is excellent, making it one of the best dessert apples of recent introduction. It also makes excellent sauce, pies and jellies. September. We recommend this variety for trial throughout the Central West.

MAIDEN BLUSH—This old variety is deserving of more general planting. The quality of the fruit is very high. Cooking tests show that it stands among the best in more ways of cooking apples than any variety grown in the Central West. It scores high for pies, dumplings, jelly and marmalade, and well up the list for sauce. It is also one of the best dessert or eating apples. It is mild in flavor, the flesh is fine grained and juicy and the aroma is very pleasing. It is a beautiful waxen yellow, with pink cheek. Fruit is medium to large, flat. The tree is quite hardy and is recommended for planting except in the extreme north and west parts of the Central West. August and September.

RAMSDELL—This old variety is esteemed wherever grown for the annual crops which it bears of large, handsome fruit, conical, splashed and striped with dark red; flesh very tender, mellow, unusually sweet and rich, excellent. Fine for



Yellow Transparent Apples



Winesap

dessert or pickling and preserving. Tree very vigorous and comes into bearing early. October to December.

FAMEUSE (Snow Apple)—Medium size, whitish ground, striped with red; flesh white, juicy, fine quality; tree blights. October and November.

***McINTOSH**—A choice variety of the Fameuse type. Tree vigorous, with spreading head; a good annual bearer. Fruit above medium to large, highly perfumed; smooth, polished yellow, almost covered with brilliant solid crimson; flesh snow-white, crisp, very tender, sprightly, aromatic, sub-acid, very good quality.

UTTER—Large, good quality. September to October. Perfectly hardy.

WOLF RIVER—Very large and handsome. September and October.

WINTER APPLES

BEN DAVIS—Almost too well known to need a description. Large, smooth, often mottled and splashed, nearly covered with red; mild. Until recently this has been one of the most profitable market fruits in the Central West. On account of its susceptibility to "Canker" it is losing favor and is not now planted so extensively. However, growers giving their orchard good care are still partial to Ben Davis, and it is thought by some prominent fruit growers that it will soon win back, at least partially, its former favor. It has been most popular south of the Nebraska-Dakota state line and east of the 100th principal meridian and should not be planted extensively north and west of these lines. It is a very long keeping variety, a splendid pie, sauce and baking apple. It bears young. December to April.

DELICIOUS—This variety is one of the most popular, if not the most popular dessert or eating apple on the market. It is fully as good as its name implies—it is truly "Delicious". It is medium to large, oblong and of the sheep-nose type. Color light green, shaded, splashed and mottled with light and dark crimson. It is fine grained, juicy, mild. Is fully as hardy as Winesap and should be given a place in every home orchard in the eastern half of Nebraska, Iowa and south and east. It is a valuable commercial variety

in the Missouri River sections from Sioux City south.

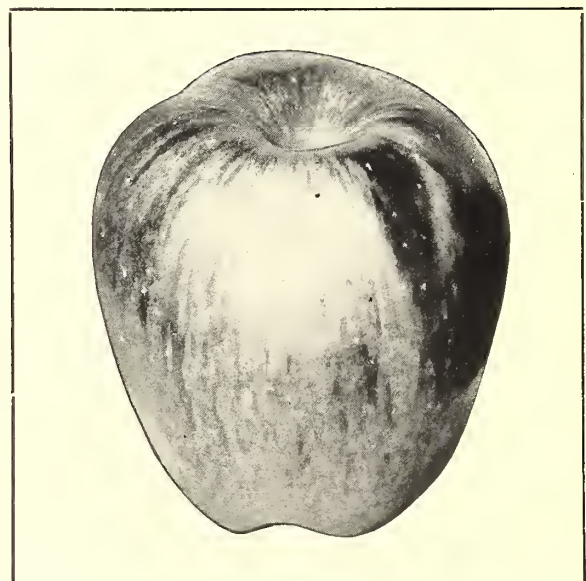
GANO—This variety is supposed to be a cross between Ben Davis and Jonathan. It resembles Ben Davis very closely both in tree and fruit, except the color in which the red is evenly over-spread and shows no inclination to be striped. In hardiness, keeping qualities and season it is very similar to Ben Davis. This variety is preferred by some commercial growers on account of its better color.

GRIMES (Grimes Golden)—An apple of the highest quality. It is one of the fancy dessert apples and ranks with Delicious and Jonathan on the market. Medium to large; bright yellow, with pink cheek; flesh fine grained, juicy, with a very pleasing spicy flavor. Like Jonathan it is equally adapted to almost all culinary uses as well as for eating out of the hand. For pies, marmalade, sauce and dumplings, it is one of the best. It has hardly enough acid for the best jelly apple. The tree is hardy, grows upright and is quite disease and insect resistant. Season of fruit, November to January.

JONATHAN—This variety is probably better known to average consumers of dessert apples than any other variety. It is recognized on all markets of the country as one of the best among the few leaders of high quality eating apples. The fact that its qualities and flavor are also superior and outstanding when used for culinary purposes adds to its popularity. The fruit is medium size, red and beautiful. The tree is slightly slow of growth when young, but grows stronger as it attains age. It bears young and abundantly. It is quite hardy and thrives in all of the Central West except in the drier portions of the north-west part. Season November to February.

KING DAVID—An improved Jonathan, as to color and productiveness; not quite as good quality. Medium size; dark red. Comes into bearing young.

***MALINDA**—One of the best winter apples for the North. Will grow and thrive much farther north and west than standard sorts like Jonathan and Winesap. Should be planted only in the North



Delicious



and West. Fruit medium to large; skin rich yellow, with dull red blush; flesh firm, juicy, mild, almost sweet. An excellent baking apple, and suitable for sauce and pies. Season January to April.

***NORTHWESTERN (Northwestern Greening)**—Tree of Wisconsin origin; vigorous grower and considered very hardy in that section; fruit large, smooth and handsome, of a greenish-yellow color. In favor wherever grown; a valuable variety. Indispensable north.

RAILS (Janet or Geniton)—Medium; has mixed and striped crimson on yellow and green; flavor is mild, vinous and refreshing. Popular as a home fruit. The blossoms appear later than any other sort, and thus they sometimes escape spring frosts. February to April.

***SALOME**—Above medium in size, partly shaded and striped with dull red, beautiful, tender, mild, slightly aromatic; very good. December to March. A very fair dessert apple and very good for sauce and jelly. Its hardness, long keeping, good quality, uniform size, will no doubt make it valuable for the North and Northwest. Perfectly hardy and should be in every orchard.

STAYMAN WINESAP—Resembles Winesap, only larger and more striped. Tender, juicy, mild, splendid. A favorite commercial apple on city markets. Is desirable for both dessert and culinary purposes. Tree is a good grower, hardy and bears well as far as tested.

TOLMAN—Medium, pale yellow, firm, rich and very sweet. October to December.

***UNIVERSITY**—A seedling of the Duchess. Tree is a very vigorous and spreading grower; fruit large, very regular; surface a clear yellow on sunny side; flesh sub-acid; quality good. Tree hardy.

VIRGINIA BEAUTY—Fruit medium to large, handsome and regular in form, with very dark red color. Quality excellent, mild. Season September to January.

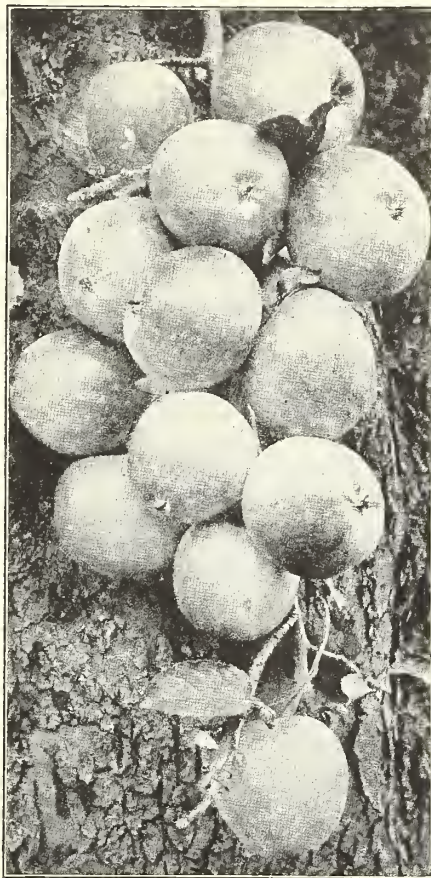
WINESAP—Medium size, dark red, juicy, mild. A favorite late winter apple and a leading commercial variety on all markets, as well as a very popular home apple in the West. Should be planted liberally both in commercial and home orchards south of Nebraska-Dakota state line and east of 100th principal meridian. Is a high-class dessert apple; also very good for sauce, pies, jelly and marmalade. December to April.

WINDSOR (Windsor Chief)—Medium to large; greenish-yellow, suffused with red splashes, becoming quite red when ripe; flesh pale yellow, sometimes streaked with red; fine grained; juicy, mild, quality excellent. Is very much esteemed as a dessert apple. Fine for baking. Tree an upright, moderate grower, becoming stronger as it attains age. Early annual bearer; very prolific. December to March. Originated in Wisconsin. The highest award was won at the Paris Exposition from apples of this variety grown in our orchards near Arlington.

YORK IMPERIAL—Medium, white, shaded with crimson; flesh firm, crisp, juicy; a good bearer and keeper; moderately hardy. November to April.

MISCELLANEOUS LIST—

Arkansas (Mammoth Black Twig)
Isham
Iowa Blush
Minkler
Missouri (Mo. Pippin)
Northern Spy



Florence Crabs

CRAB APPLES

Within the past few years much attention has been given to improving this class of fruit, because of their adaptability to cold sections, where only a few varieties of apples can be successfully grown. These efforts have been attended with marked success. Crab Apples succeed equally well in all sections, and are valuable for cider, preserves, jelly, pickles, and some of the improved sorts are excellent for eating.

(*) Asterisks indicate the most hardy varieties.

***FLORENCE**—Fruit waxen, yellow and red, medium size, very handsome and good quality. Fine for jellies, preserves and pickles. Tree perfectly hardy; is an early and annual bearer. September.

HYSLOP—Large, dark red, sub-acid; bears its fruit in clusters; good eating and cooking; very hardy; very popular. When over-ripe, becomes "floury". September.

***LARGE RED (Siberian)**—Large, pale red and yellow; good quality, large tree, with coarse foliage; early bearer; fruit much larger than the common Siberian.

***WHITNEY**—One of the largest, glossy green, splashed with carmine; firm and juicy; best quality; an iron-clad; a great bearer. Ripens in August. Makes a fine white cider. Fine for preserves and jellies.

***YELLOW SIBERIAN**—Medium size, good quality; tree hardy. Excellent for pickling.



PEARS

A DELICIOUS EATING FRUIT

PEAR growing, at one time, was considered a failure in Nebraska. With better knowledge of varieties and culture, pears are succeeding to such a degree that considerable commercial planting has been done in eastern Nebraska of recent years. We have faith in a carefully selected list of pears when properly cared for. Plant only two or three varieties; try to get well ripened growth; give only fair cultivation. Be content with an annual growth of from twelve to eighteen inches. Rank, late growth is often the cause of disease. Plant four or five inches deeper than stood in nursery, and twelve to eighteen feet apart.

(*) The hardiest varieties marked with asterisk.

For planting instructions, see page 29.

STANDARD PEARS

BARTLETT—Large size, with often a beautiful blush to the sun; buttery, very juicy and high flavored; bears early and abundantly. Very popular. Blights with us. August.

CLAPP FAVORITE—This is a seedling of Bartlett and earlier ripening. It is lemon yellow in color, with brown dots. In quality it is almost the equal of its parent.

***DUCHESS**—Is very large, dull greenish yellow, streaked and spotted with russet. Flesh white, buttery and very juicy; rich; very excellent flavor. This variety and Louise, when grown as dwarfs, are more profitable than standard sorts.

***FLEMISH**—Large, red cheeked, beautiful, excellent quality, productive; one of the hardiest; very popular in the West.

***KIEFFER**—This pear was raised from seed of the Chinese Sand Pear, accidentally crossed with the Bartlett or some other kind grown near it. Tree has large, dark green, glossy leaves, and is of itself very ornamental; an early and annual bearer; the fruit is showy, valuable for canning, and never rots at the core. Is nearly blight-proof. October and November.

SECKEL—Small, but of the highest flavor; a standard of excellence; a slow grower, but bears early. Ripens last of August. Productive.

SHELDON—Large, plump and round; russeted; is handsome and good; one of the most reliable for the Central West.



Bear at two years from planting. These varieties have borne eleven crops in fourteen years in our orchards. Tbest dwarf pear.

DWARF PEAR TREES

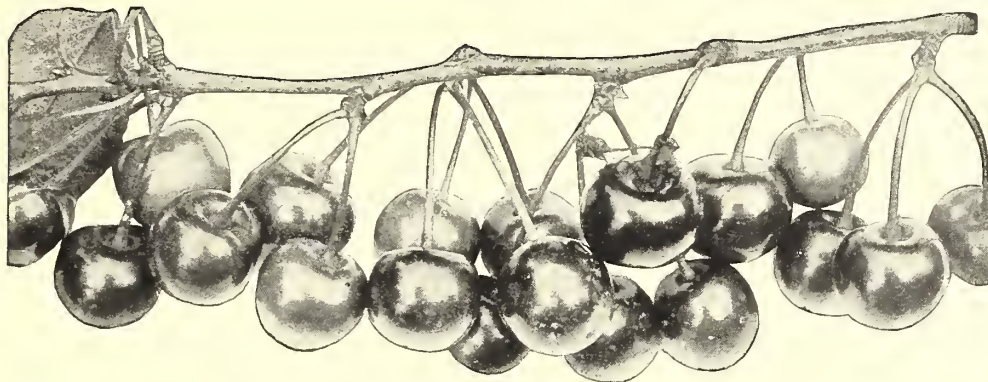
The pear is one fruit that can be grown profitably as a dwarf tree. It differs from a standard tree in that it is grafted on a quince root. This retards its growth and makes a dwarf tree. This slower growth makes it more resistant to blight and other pear tree troubles than the standards, which grow more rapidly. It also causes the tree to bear earlier, sometimes producing fruit the second year, and often quite heavily the third and fourth years after planting. They may be planted much closer (8 to 12 feet apart) than the standards, which makes them very desirable for city planting and for a limited space on home grounds. The Duchess is the best suited variety for dwarfing. A few dwarf pear trees should be in every home orchard or garden in the Middle West.

DUCHESS—Described among Standard Pears.

CLAPP FAVORITE—Described among Standard Pears.

KIEFFER—Described among Standard Pears.

SECKEL—Described among Standard Pears.



Early Richmond Cherry

CHERRIES

The FRUIT of MANY USES

EVERY home owner, whether in city, village or country, can plant cherries. Every housewife likes them for canning. They are one of the first fruits to ripen and one of the most resistant to insects and disease. Plant a few each year. Plant twelve to twenty feet apart. For planting instructions see page 29.

MAY DUKE—This is the most popular of all the Dukes and is doing well here. An upright, beautiful grower, and bears well. Fruit large, oboate, dark red. Is not affected by the leaf rust so destructive in wet seasons. Sweeter than Richmond and Montmorency. Is fine to eat from the hand as well as for canning.

***MORELLO**—Medium to large; is blackish red; rich acid, juicy and good; very productive. This is an excellent late canning variety. Its color, both skin and flesh, is a black red, which gives it a very rich appearance. It is better adapted to sections of medium to light rainfall than to the lower more moist parts of the Central West.

***MONTMORENCY**—Large, red, acid; larger than Early Richmond and ten days later; prolific and perfectly hardy and indispensable in the higher altitudes. Quality the very best. This variety is getting to be one of the popular home orchard sorts and is now the leading commercial variety in the Central West.

***RICHMOND**—Medium, red, fine when well ripened. Tree is hardy and very productive. This variety has been widely planted and has given general satisfaction. Home planters are now planting these in

equal numbers with Montmorency, thus extending the season to about four weeks.

WRAGG—Same as Morello.

***ZUMBRA CHERRY**—New. Undergoing trial. This is a pin-cherry, sweet cherry, sand cherry hybrid produced by the Minnesota Experiment Station. The tree is a dwarf grower and produces its fruit in thick clusters along the limbs. Fruit small to medium, dark purplish black; round, crisp, juicy. Ripens last of August.

COMPASS CHERRY-PLUM

This hardy northern fruit was originated in Minnesota and is a cross between the sand cherry of the plains and native wild plum. It will grow and thrive where extreme cold and semi-arid conditions prevail. It usually bears the second year from graft and often nursery trees are loaded down. The quality is much better than that of the sand cherry, having lost much of the astringency of this parent in hybridization. The flesh is more firm than that of most native plums, making it valuable for preserving. It is also prized by many to eat from the hand. Every home, especially in the North and West, should have some of these trees. They will abundantly bear fruit that will be thoroughly appreciated.



Montmorency

Read about our Land-
scape Dept. Page 5



PLUMS

PLUMS are used for canning, sauce, butters, jelly, and eating from the hand. This fruit has been improved very rapidly in recent years. Varieties of highest quality only a few years ago have now been discarded for newer and better ones. We have been testing out in our trial grounds many new varieties of promise, and are pleased to state that we are now offering some varieties that are really worth while. We have discarded almost all of the pure Japanese and European sorts, as they are only semi-hardy, and we now have hybrids with quality fully equal to these kinds and much hardier. Read the descriptions. Plant Plums ten to eighteen feet apart. Select more than one variety to insure proper fertilization of bloom. Plums are self-sterile to quite an extent.

(*) The hardier varieties marked with asterisk.

For planting instructions see page 29.

STANDARD PLUMS

OMAHA—A valuable new plum, originated by the late Theodore Williams of Benson, Nebraska. Very large. The flavor is excellent; meat is solid and pit small. A favorite from the tree and one of the best canning plums grown. Its size, texture and flavor resemble the Burbank, one of the leading California plums, and as a market plum it sells quite as readily. This variety is one that we will guarantee to please the most critical and its hardiness and productiveness in severe climates makes it very valuable. Perfectly hardy in Minnesota. Season medium.

***WOLF**—Large, dark red; good quality. Extra fine for jelly and canning. It is a vigorous grower, entirely hardy, and an abundant bearer; one of the very best pure American sorts. Has given satisfaction in all parts of our territory. Season August.

***WYANT**—Large, round, oblong, purple-red, thick skin, which peels readily; flesh firm; a perfect freestone and of excellent quality. Is very fine for jelly and butter and an excellent plum from the tree. Ripens in August. Has been our leading variety in northern Nebraska and South Dakota for a number of years.

LOMBARD—Large, greenish-blue; flesh yellowish green; juicy and pleasant. A mild flavored, solid flesh plum. Fine for eating from the hand and for canning. Ripens in August; tree vigorous; one of the most widely cultivated plums of America. One of the best of the European sorts. Moderately hardy.

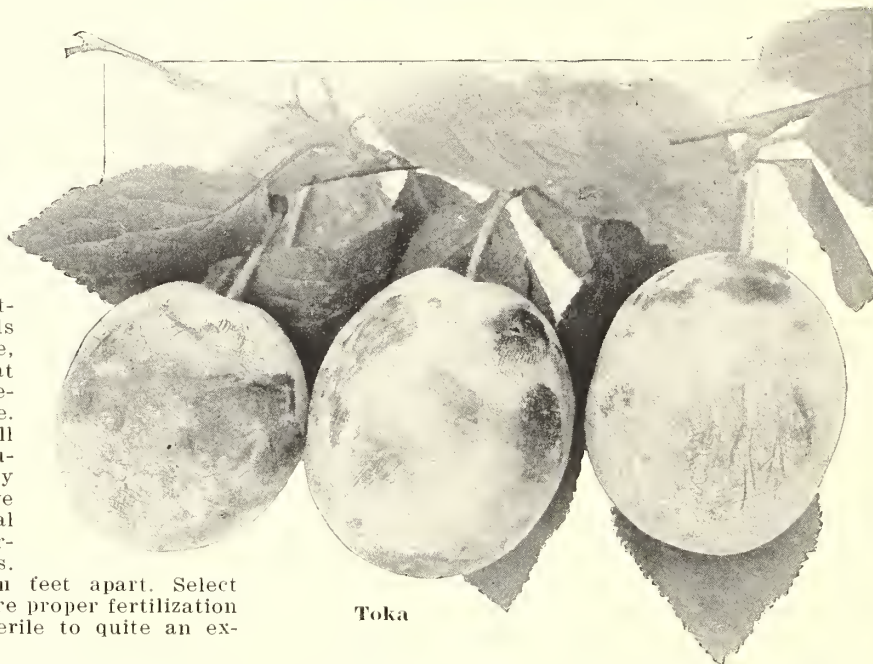
BOHEMIAN PRUNE—An early continuous bearer. Fruit of medium size, prune shaped; blue, freestone; much better than German Prune. A fine canning and eating variety. The best prune for the Central West. Moderately hardy.

*HANSEN'S TREE PLUMS

Professor N. E. Hansen of the South Dakota Experiment Station, one of the leading horticulturists of America and authority on horticulture in the Northwest, has been working for twenty-five years to develop hardy strains of fruit for the bleak prairies of the Northwest. The U. S. Government sent him to Siberia to find and bring back super-hardy trees and plants for the more rigorous sections of this country. Through his explorations, hybridization and selection, he has brought out numerous hardy varieties that are very valuable for the northwest plains. Among the most important and valuable are several varieties of plums, extra hardy and of superior quality. They are so good that they are replacing some of the leading high-class varieties even in sections of the country where climate is not to be considered—where any varieties of plums are hardy. We have the best of these, and describe them below. Of all the varieties introduced, we find those listed below are the best. Plant a half dozen or a dozen on your home ground. You will be enthusiastic over their quality and bearing.

TOKA PLUM—New Prof. Hansen variety. A good commercial possibility. A cross between the native northwestern wild plum and the intensely fragrant Chinese apricot, *Prunus Simoni*. The large, remarkably firm fruit has a rich fragrance and excellent quality, good for eating and canning. We have had requests for more of this variety in our own orchards. The bright color and rich fragrance helps much to attract attention to it. Good hardy, pretty, upright tree. Bears in two years.

HANSKA—Hanska is Sioux Indian for "tall", alluding to the extremely rapid growth in nursery and orchard. Three-year-old trees attain a height of twelve feet. The female parent is a seedling of our wild northwestern plum (*Prunus Americana*); the male parent is the large, firm-fleshed, fragrant apricot-plum of China (*Prunus Simoni*), popular in the orchards of California. The fruit of this variety is much admired for its beautiful color, which is bright red, with heavy blue bloom, firm yellow flesh, good quality and rich fragrance. The fruit is one and one-half inches to one and nine-sixteenths inches in diameter, often larger. When cooked, the apricot flavor is brought out to



Toka



perfection, entirely unlike any native plum. The flat shape also distinguishes it from all the other hardy plums in the Northwest. The Hanska has been known to bear heavy crops when native plums were almost a total failure. Begins to bear at two years. Very small pit. Exceedingly hardy and vigorous.

WANETA—This is undoubtedly Professor Hansen's masterpiece in plums. It combines hardness, immense size, delicious quality, long keeping, beautiful color, small pit, and early bearing, often producing a good crop in two years from planting. Following is Professor Hansen's own description of this variety: "This is the largest of all the Hansen Hybrid Plums. It is a 2-inch, 2-ounce plum, and of very strong growth in nursery. An early heavy and persistent annual bearer of delicious plums of immense size. It is a cross of the America, a large Japanese plum, with pollen of the Terry, the largest native plum. The Waneta combines in large measure the most desirable points of the native and the Japanese plums. In a visit to the 1920 Iowa State Fair at Des Moines, I noticed that Waneta and the sister variety, Kahinta, were by far the largest plums on exhibition."

*HANSEN'S BUSH PLUMS

OPATA—(Sioux Indian for "bouquet"). First to ripen. At blooming time it is a gigantic bouquet of pure white flowers of most exquisite fragrance. Blooming just a little later than the ordinary or American plum, and in this way escaping frost dangers. Again, when the fruit is ripe, combine the large leathery foliage and the dark purplish-red fruit, with blue bloom, it is, indeed, a bouquet at that time. The Opata is a cross from the Dakota Sandy Cherry and the Gold Plum, originated by Luther Burbank, and for

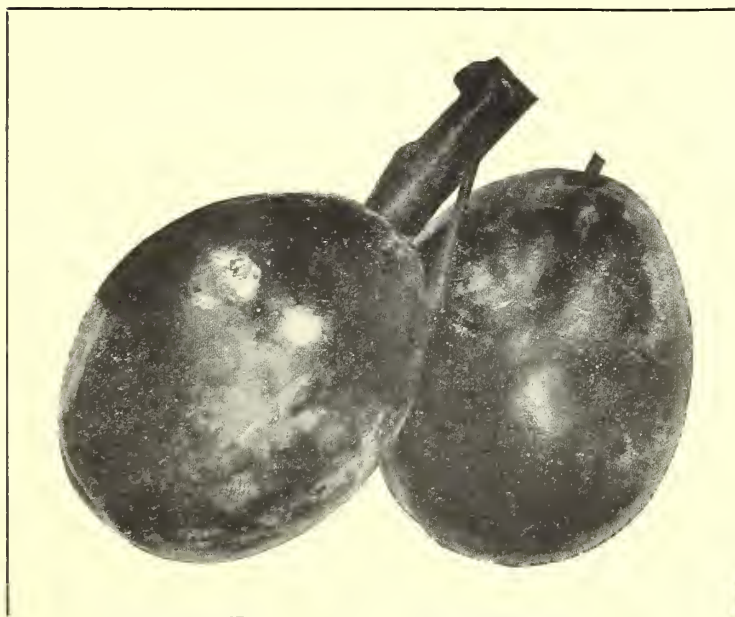
which \$3,000 was paid when first introduced. Tree is vigorous in growth, heading very low and of quite spreading habits, and we recommend that you allow it to grow rather in this form than in the regular high trunked trimmed tree form. It forms fruit buds freely at one year old and bears without exception the next year. Color of flashy green, flavor very pleasant, combining the spicy acid of the Sand Cherry with the rich sweetness of the Gold Plum. Ripens with us about July 10th, and will hang on the trees in good condition for about two weeks. Generally free from rot, and almost immune from the sting of the Curculio.

SAPA—(Sioux Indian for Black). The female parent is one of our selected seedlings of the western Sand Cherry, a favorite of the Sioux Indians; the male parent a very large, purple-fleshed Japanese Plum originated by Luther Burbank of California, and by him named the Sultan. An extremely early bearer; one-year-old trees in nursery row have many fruit buds. Fruit medium, glossy dark purple skin; flesh rich, dark purplish-red, fine flavor. Sapa Plums raised at Brookings, South Dakota, were one and three-eighths inches in diameter, weight five-eighths ounce, on one-year-old trees set the preceding year and bearing a heavy crop. Season very early. Should also be grown in bush form.

APRICOTS

THIS fruit is a close relative of the plum and peach, combining the qualities of both. The fruit ripens after the early cherries and just before plums and peaches. Tree is fully as hardy as the peach and requires about the same culture. It ships well and commands a good price in the markets, and for drying and canning it has no superior. Russian varieties are the earliest and most hardy. Blooms early and are sometimes caught by frost.

RUSSIAN APRICOT — Medium, light orange color; flesh sweet juicy; good quality. August.



Waneta

CONSULT
OUR
LANDSCAPE
DEPARTMENT

See Page 5



PEACHES

THE north part of Nebraska is not a peach country, and it is only by painstaking care that we grow even a limited supply of the better class. The peach prefers a well drained loam. We recommend the following sorts, which we think hardy enough to stand without protection in the southern half of Nebraska. Please remember the asterisk (*) sorts will do best in the greater part of the state. Plant 12 to 20 ft. apart.

For planting instructions, see page 29.

ALEXANDER—Size medium to large, handsome and regular in form, with deep maroon shade, covered with the richest tint of crimson; fair in quality, with a vinous flavor; adheres to the stone; should remain on the tree until fully ripe. The earliest peach.

***CHAMPION**—Originated in Illinois; fruit is large, beautiful in appearance; flavor delicious, sweet, rich and juicy; skin is creamy white, with red cheek, becoming quite red when ripe. Freestone; season last of August. Tree vigorous. One of the very hardiest and best varieties for Nebraska.

***CROSBY**—Medium, rich orange yellow, with blush; freestone; pit small, flesh yellow, juicy and sweet. Tree low, spreading, willowy habit of growth; perfectly hardy in a peach country. Season, mid-season.

MATHEWS—Skin golden yellow, streaked with red; flesh yellow, firm, of excellent quality. Late. Freestone.

***WHITFORD**—Originated by C. A. Whitford of Arlington, Neb., and is one of the best freestone peaches for Nebraska that we know of. A rich golden yellow, sometimes slightly flushed; quality rich and delicious; a reliable bearer and as hardy as Wright's. Season, late.

***WRIGHT**—Originated in Nebraska. A good one for Nebraska. Season, late. Freestone.

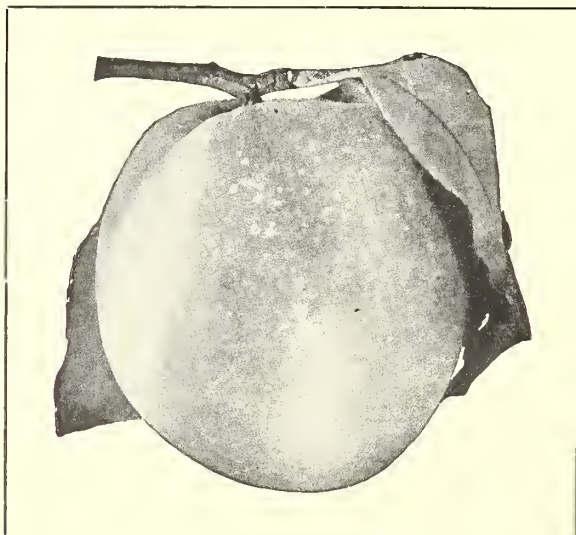


Champion

WELCOME HIM



The Salesman who represents Marshall's Nurseries is selected with great care. You will find him courteous and anxious to serve. Feel free to consult with him. He will be pleased to assist you with your orchard and gardening problems.



Crosby



GRAPES

THE UNIVERSAL FRUIT

THE Grape is at home in the West. In our deep soils, bright sun and dry atmosphere, it attains its highest perfection. There is scarcely a yard so small, either in city or country, that room for a dozen to fifty vines cannot be found, furnishing an abundance for family use. To grow grapes successfully, plant in well drained soil.

For planting instructions see top of page 40.

BLACK GRAPES

***BETA**—This grape is extremely hardy and will stand without protection into North Dakota. It was introduced by Professor Green of Minnesota, and is becoming very popular throughout Minnesota and the Dakotas. The fruit is medium size, fair quality and a very heavy bearer. We recommend the Beta for the North where other grapes winter-kill—it will thrive and bear abundantly.

***CONCORD**—Bunches large, berries large, round; skin thick and covered with bloom; flesh juicy, sweet. Vine very hardy, vigorous and productive; at present the most popular of all our native sorts.

***MOORE**—A large, black grape of the Concord type, the entire crop ripening before the Concord; bunch medium, berries large, with blue bloom; flesh pulpy and of good quality. Vine is hardy, moderately productive, better as it attains age. Planted extensively as a market sort.

WORDEN—This variety is a seedling of the Concord, which it greatly resembles in appearance and flavor, but the berries are larger, the fruit is better flavored and ripens several days earlier.

RED GRAPES

AGAWAM—Vigorous grower; large, round, with rich, peculiar aromatic flavor; very desirable; should be covered in winter.

***BRIGHTON**—A cross between Concord and Diana



Concord Grapes

Hamburg; bunches large, berries of medium size, flesh sweet, tender and of the highest quality; ripens early; dark red, when fully ripe almost purple. Healthy, but should be laid down and covered with litter in late fall.

WHITE GRAPES

***POCKLINGTON**—Is a seedling of the Concord; vine hardy, both in wood and foliage; strong grower; called a white grape, but the fruit is golden yellow; clear, juicy and sweet to the center, with little or no pulp; bunches very large, sometimes shouldered; berries round, very large, and thickly set; quality, when fully ripe, sweet and richly flavored; perfectly hardy.

NIAGARA—Clusters large and handsome, compactly filled with large berries, having a thin but tough skin. When fully ripe they are a fine pale yellow, with a thin white bloom, and the foxy aroma of an earlier stage has almost disappeared; the flesh is slightly pulpy, tender, sweet and delightful. Vine is fairly vigorous and productive. Ripens with Concord.

JUNEBERRY

DWARF—Grows four to six feet high; bunches out from the ground like currants; resembles the common Servis or Juneberry in leaf and fruit, but the fruit is larger and in color almost black; commences to bear the second year after transplanting, and bears profusely. No farm or garden should be without this most excellent dessert.



Beta Grape

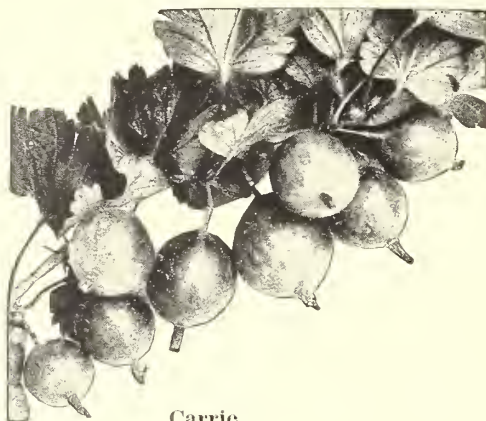
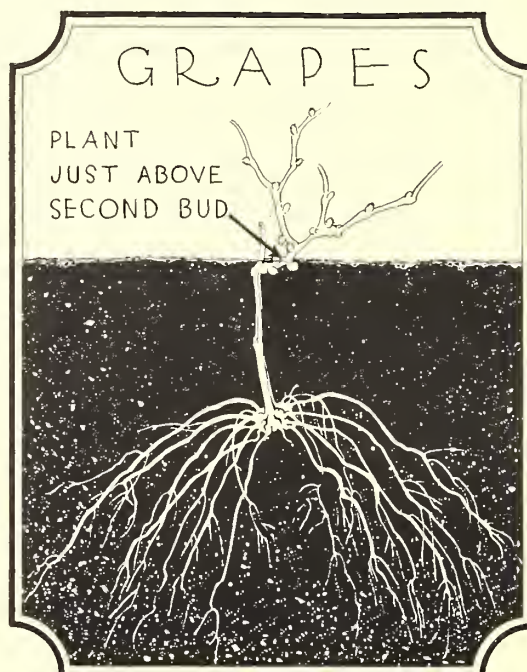


HOW to Plant GRAPES

These should be planted ten to twelve inches deep in holes large enough to admit roots without curling them, pressing soil solid about roots. Cut vines back to within three or four buds of the roots. Keep the ground clean by cultivating; if impossible to cultivate, mulch.

Prune in November before covering for winter. It should be remembered that grapes bear on new wood and should be cut back severely. A three-wire fence is probably the most satisfactory trellis on which to train grapes, but the posts should not be more than a rod apart in order to afford sufficient support for the heavy new wood each year. Set plants six to eight feet apart in the rows and rows six feet apart.

We regard covering as profitable and in most sections as essential. Use coarse hay or dirt in covering.



Carrie

DOWNING—Fruit large; flesh whitish green, soft, juicy and good; plant vigorous and prolific; one of the very best.

***HOUGHTON**—The old well-known sort; pale red; quality good. It is rather small, but productive, healthy and a very reliable gooseberry.

GOOSEBERRIES

Prolific and Easy to Grow

IN order to produce large, abundant crops of gooseberries, it is necessary to manure heavily and prune closely; they require about the same location, treatment, etc., as the currant, except they will stand more sun. Plant four feet apart.

***CARRIE**—Originated in Minnesota. Fruit medium to large. A strong grower and very productive. Excellent quality. After the third year the bush loses its thorns. Hardy.



HOW TO PLANT GOOSEBERRIES and CURRANTS

Prepare the ground by deep plowing or spading. Cut the plants back fully one-half. Plant four feet apart both ways, same depth as plants stood in the nursery row, and firm soil well.



CURRENTS

THE value of Currants needs no rehearsing. We seldom see them missing from the well-kept garden. Everyone knows their value as a household necessity; nothing makes such jelly, with perhaps the one exception, the crab, and even that must give way to the bright color produced by the Currant.

Where half-a-dozen currant bushes were once the extent of cultivation, we now see acres utilized to supply the demand of our cities. No one can afford to leave this well-tried fruit out of their list for a complete collection.

Currants love a cool, deep soil, and a little shade. Among fruit trees or along the north side of a fence is a good place. No matter how good the soil, give good cultivation and plenty of manure. The following varieties will give good satisfaction.

Plant 4 ft. apart.

For planting instructions, see bottom of page 41.

CHERRY—Well known; large, bright crimson, very acid; an old favorite; one of the largest currants.

***NORTH STAR**—Both berry and bunch are very large; the fruit is superior, very sweet and rich in quality, firm; a very good market currant; desirable as a dessert fruit in the natural state, and unequalled for jelly.

PERFECTION—Fruit very large, red; bunch long; very productive. New and not thoroughly tested in the prairie states.

VICTORIA—Large, bright red; bunches very long; late; very productive and valuable. This is a standard, very good and reliable currant, and will suit everybody.

***WHITE GRAPE**—Very large, white; this is the very best table variety of currants known; sweet or very mild acid; good grower; hardy; perfectly satisfactory in every respect, and a currant we most heartily recommend for any purpose.



BLACKBERRIES

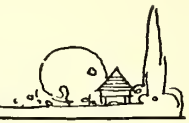
PLANT in rich soil and a little shade, among trees, or on north side of trees or fence, if possible. Of all varieties tested, the Snyder has proven the hardiest, and Stone's Hardy second.

***SNYDER**—Medium in size, sweet and good, strong grower; very productive; extremely hardy; has fully proven its value. After all the experience we have had with blackberries, we are thoroughly convinced that this is the berry for the West and Northwest. Should be universally planted.

DEWBERRY (Lucretia)—This is the finest of its class; one that has proven successful; a strong grower. It is really a new trailing blackberry, easily protected in winter. Set the plants two feet apart in the row; cover in winter with coarse litter and mulch the plants with it in the spring, thus keeping them off the ground.

How to Plant Blackberries, Raspberries and Dewberries

These should be set fairly deep, except one-year-old raspberry plants, the new growth of which starts from the crown in the mass of hair-like roots; these should be planted shallow, with the crown not more than one inch below the surface. Too deep planting is often fatal to one-year-old raspberry plants. Plant in rows five or six feet apart, with plants three to four feet apart in the row. Firm the dirt around each plant. Keep surface of ground loose. Water in dry weather during growing season. Mulch in winter after the ground is frozen.



RASPBERRIES

for EVERY GARDEN

THE raspberry is one of the most delicious and popular fruits grown. They are always in demand in season and command good prices on the markets. For canning purposes they are unexcelled. They are easily cultivated and require little care. Cut out the old and weak shoots each year. With a little care and attention they will produce large crops of berries. For planting and care, see bottom of page 41. The following are best adapted to the West:

BLACK RASPBERRIES

***CUMBERLAND**—Berries very large and even in size; bears very abundantly; ripens between the Kansas and Gregg. Strong grower and one of the hardiest. The best all-around black Raspberry known.

***CARDINAL**—A very valuable cross between the red and the black. Thrifty and productive; quality good. It is by far the best of the crosses yet introduced. Fruit purple; hardy; a good one.

RED RASPBERRIES

LATHAM—Red. A very fine fruit for home or market. Very hardy.

ST. REGIS (Everbearing)—It bears the first season. Plants of the St. Regis put out in early part of April gave ripe berries on the 20th of June and continued to produce ripe fruit until late October.



Cumberland Raspberries



IT ALL DEPENDS on the PLAN

YOUR home represents a definite opportunity, an opportunity to make of it something exceptionally fine. The greatest opportunity comes at the beginning before the building is designed and started. Here is the finest chance to work out a scheme offering the most in convenience, attractiveness and general satisfaction from the standpoint of both the house and grounds.

That is the purpose of the landscape plan. The landscape plan provides a program for orderly development in which all the requirements for fitness and beauty have satisfied to a degree possible only when approached in this comprehensive manner.

CONSULT OUR LANDSCAPE
DEPARTMENT

See Page 5



STRAWBERRIES

THE Strawberry has been styled the queen of fruits. It is the first to ripen and the quickest to come into bearing. Can be successfully grown on a great variety of soils; responds readily to kindly location and liberal feeding and culture. Every home builder who fails to have an abundance of this delicious health-giving fruit misses a chance of great things for little money. The strawberry prefers a cool, moist soil; good upland soil is the best, well enriched. Spring planting is best.

Of the hundreds of varieties that have been introduced we offer only a small number of the best, all of which will thrive under any ordinary care. Be sure to note (*) varieties, as we believe these two (Warfield and Dunlap), when planted together, will give the planter more real satisfaction and better value than any other two varieties of standards.

***DUNLAP**—Originated in Illinois and is of the Warfield type. One of the best all around varieties ever introduced; has a perfect blossom, is hardy and productive; is able to hold its own under any rough and tumble treatment, bringing every berry to maturity, and is the nearest perfect in every respect of any berry we know of. We believe it to be one of the greatest berries ever introduced.

***WARFIELD (Imp.)**—We place this at the head of the list of valuable berries, excepting the Dunlap, because after being well tested over about every state in the Union it is considered one of the best berries grown, all things considered, that go to make a profitable berry. The Warfield, when planted with Dunlap as a fertilizer, will produce more good, marketable fruit on our grounds than any other we can now name.

EVERBEARING

Strawberries that yielded fruit continuously from May until frost have been known for a long time. The new cultivated sorts were originated by cross-pollinating these wild everbearing Alpine sorts with our standard varieties and combining the everbear-



Progressive

ing habits of the one parent and the size and quality of the other.

We have been testing the different varieties of everbearers for several years on our own grounds, and offer to our patrons only two varieties.

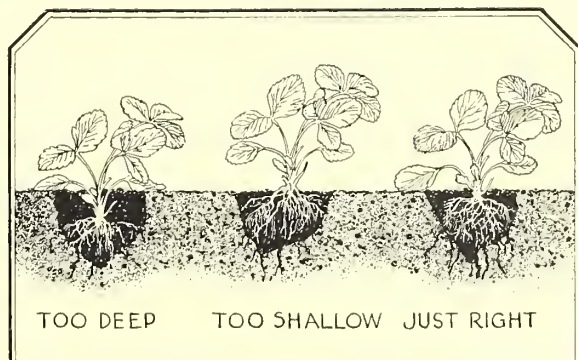
***PROGRESSIVE**—Our leading everbearing variety to date.

***CHAMPION**—New with us. Being little larger than Progressive, and after two years on our grounds it appears to be a better bearer.

We transplant our shade and street trees several times. It gives them the kind of roots that make transplanting easy.

HOW TO PLANT STRAWBERRIES

Plants should be set and cared for the same as tomato and cabbage plants. Plant in rows three to three and one-half feet apart and twelve to fifteen inches in a row. The cheapest way to grow them is to plant in long rows and tend with a corn plow, using shields. Never allow rows to spread to more than eight or ten inches in width. Cover the plants late in the fall with one or two inches of prairie hay or stable litter (if free from weed seed). This covering should be removed from the plants in early spring and left between the rows until the fruit is picked, then it should be removed from the patch and the rows cultivated the same as before.





ASPARAGUS

THE GARDEN FAVORITE

THIS much neglected vegetable is very easily grown and should find a place in every city and farm garden. Such immense quantities of it can be grown on a small space that no home owner can afford to be without it. This vegetable is rich in vitamins, which are so essential to health, and especially to the development of children. The Asparagus roots should be planted in well-prepared beds, the soil of which has been enriched by liberal quantities of well rotted manure. For use it should be cut just at the top of the ground when it is from three to five inches high. This is one of the earliest of vegetables, the shoots coming out before the frost is hardly out of the ground.

CONOVER—Is the best for general planting, and is largely grown.

HOW TO PLANT ASPARAGUS

Prepare ground by deep plowing or spading. Set plants twelve to eighteen inches each way, three inches deep, with roots well spread out. Every fall mulch the bed well with manure.



Asparagus

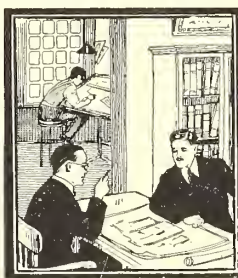
RHUBARB

LINNAEUS—Early, tender and good; season long.

MYATT'S LINNAEUS—A selected strain from Linnaeus grown by division which makes all hills alike. Seeds very little. It has large stems, with good color, and very desirable for the market gardener.

HOW TO PLANT RHUBARB

Prepare ground as for asparagus. Set the plants with crown or eye two inches under ground. Plant three feet apart each way. Mulch in winter. Give clean cultivation the same as for any other crop.



A SMALL
INVESTMENT
ADDS
GREAT
VALUE

Have you ever given careful consideration to the question of how much a few trees and shrubs would add to the value and beauty of your home?

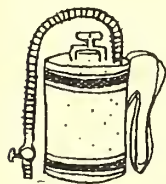
An investment of \$15.00 to \$50.00 can be made to add from \$100.00 to \$500.00 to the selling value of a property. We can offer you plain practical suggestions as to how it can be done.

Consult our Landscape Dept.

(See Page 5)



SPRAYING GUIDE



THERE are four distinct types of troubles to combat, i. e.: chewing insects, sucking insects, scale insects and fungous diseases. Chewing insects are controlled with a stomach poison, some form of arsenic (lead arsenate), sucking insects (lice or aphids) by body contact poison, (nicotine), and fungous diseases by lime-sulphur or Bordeaux mixture. Be sure you know what you are spraying for, since arsenate of lead will not control lice or aphids, nor will nicotine control apple worms, and neither of these will have any effect on apple scab or other fungous diseases. Lime-sulphur is used as a dormant spray for scale insects and also for fungous. In spraying the apple keep in mind the two main troubles in the Central West, codling moth and apple scab, and in controlling these most other troubles are incidentally controlled.

SPRAYING MATERIALS

The most common and best form of arsenic used is "arsenate of lead". This may be secured from drug stores and seed and garden supply houses. Thoroughly dissolve three pounds of paste arsenate of lead or $1\frac{1}{4}$ pounds of dry arsenate of lead in a small amount of water in a pail and add to fifty gallons of water or other spraying solution.

Bordeaux mixture is prepared by dissolving four pounds of copper-sulphate (bluestone) in a small amount of water and diluting to twenty-five gallons; slacking five to six pounds of good lime and

adding water to make twenty-five gallons. These solutions should then be combined by pouring or dipping simultaneously from each into a third vessel or spray tank.

The commercial lime-sulphur is used almost exclusively by many fruit growers. This may be obtained from same sources as arsenate of lead or direct from manufacturers. To combine the fungous spray and the insect spray simply add the dissolved poisons to the fungous solutions.

SPRAYING MACHINERY

The size of the spraying outfit needed depends on the size and age of orchards. High pressure is essential for effective work in all cases. While this may be obtained with high-grade hand-power outfits, it is slow and hard work to maintain the pressure. For small orchards containing up to 100 or 200 trees, however, this kind of an outfit can be made to do satisfactory work. But for larger orchards gasoline power outfits are recommended. These are now manufactured in several sizes, but all maintaining the same high pressure. The prices range from about \$100 up for complete outfits. These are assembled in such manner that the engine may be easily disconnected and be used throughout the year for pumping water and other light work about the farm, making the actual extra cost for the pumps and other equipment little more than for the best hand outfits.

If interested in a spraying outfit, advise us and we will place you in touch with manufacturers of good machines.



When To Spray And What To Use

*(The following schedules are recommended by the University of Nebraska College of Agriculture. Quantities suitable for home use arranged by us are suggested in the schedules).

APPLE SPRAY SCHEDULE

TIME	MATERIAL	PRINCIPAL PESTS AND DISEASES	REMARKS
Dormant—Before leaves open.	Lime Sulphur Solution 1 gallon to 7 or 8 gallons of water. 4 tablespoons to one pint of water.	Scale.	Use only when scale is present.
Cluster bud—when individual flower buds separate in cluster.	Lime Sulphur Solution $1\frac{1}{2}$ to 50 gallons of water, plus $1\frac{1}{4}$ lb. lead arsenate. (Dry Lime Sulphur 4 lbs. to 50 gallons may be used instead of solution). Lime Sulphur Solution 7 tablespoons to one gallon of water, plus 4 level teaspoons lead arsenate. (Dry Lime Sulphur 8 level teaspoons to one gallon).	Scab. Curculio. Leaf-eating insects.	Add nicotine sulphate $\frac{1}{4}$ pint to 50 gallons when aphids are abundant. $2\frac{1}{2}$ teaspoons to one gallon.
Calyx—just after petals fall.	Same as above.	Same as above. Codling Moth. Lesser apple worm.	Most important spray for worms.
10 days after petals fall.	Same as above.	Same as above.	Necessary only when blotch is prevalent.
*3 weeks after petals fall.	Same as above.	Same as above. 2nd brood Codling Moth. Blotch. Sooty Blotch.	Essential where worms are numerous.
*July 10-15.	Same as above.		
*Aug. 1-10.	Omit lime sulphur; use insecticide plus 2 lbs. stone lime to 50 gallons water. 5 level teaspoons stone lime to one gallon solution.	Late worms.	



Owners of small farm orchards may not find it necessary to apply all the sprays recommended. In such cases the calyx spray, the three weeks spray, and the July spray are likely to prove the most valuable. * If the weather is very hot, reduce the lime sulphur to one gallon to fifty or two pounds (dry) to fifty, 4 $\frac{1}{3}$ tablespoons lime sulphur solution to one gallon water or 2 $\frac{3}{4}$ level teaspoons lead arsenate. These are especially useful in controlling the apple worm. The cluster bud spray is valuable more largely in controlling scab and in certain seasons and with some varieties

may be necessary also. The commercial grower will do well to apply at least five of the six summer sprays recommended if he expects to have clean fruit.

PEAR SPRAY SCHEDULE

The spray schedule for pears follows very closely that for apples, the cluster bud, the calyx and the three weeks sprays being the most important. The July spray may also be needed where worms are numerous. The same materials are used as with apples. The principal pests and diseases are Codling Moth, Curculio and Scab.

CHERRY AND PLUM

TIME	MATERIAL	PRINCIPAL PESTS AND DISEASES	REMARKS
Dormant.	Lime Sulphur Solution 1 to 7 or 8, 4 tablespoons to 1 pint.	Scale.	Necessary only when scale is present.
Before blossoms open.	Lead Arsenate $1\frac{1}{4}$ lb. and lime 2 lb. to 50 gallons water. 4 level teaspoons lead arsenate to 1 gallon water and 5 level teaspoons dry lime sulphur.	Curculio.	Necessary only when this pest is bad. If plum pocket is prevalent, also add Lime Sulphur Solution $1\frac{1}{2}$ gallons to 50.
After shucks fall.	Lead Arsenate $1\frac{1}{4}$ and Lime Sulphur Solution $1\frac{1}{2}$ to 50. (Substitute Dry Lime Sulphur 3 lbs. to 50 gal, if desired). 4 level teaspoons arsenate of lead to one gallon water and 7 tablespoons Lime Sulphur Solution. (Or substitute dry lime sulphur 8 level teaspoons to one gallon).	Curculio. Leaf spot. Brown rot.	Most important, spray for these fruits.
2 weeks later.	Same as above.	Same as above.	
After cherries are harvested.	Same as above, except Lead Arsenate may be omitted if leaf-eating insects are not present.	Leaf spot.	Necessary only when leaf spot is bad. Usually essential for late or English Morello type varieties.

SPRAY SCHEDULE FOR GRAPES

TIME	MATERIAL	PRINCIPAL PESTS AND DISEASES	REMARKS
As buds are swelling.	Arsenate of lead 2-3 lbs. to 50 gallons of water. 7-10 level teaspoons to 1 gallon of water.	Grape Flea Beetle.	Spray as soon as pest is noticed. Repeat if necessary.
When shoots show 2nd or 3rd leaf.	Bordeaux 4-4-50 and Lead Arsenate 2-3 lb. 8 level teaspoons Bordeaux mixture; (4-4), 7 to 10 level teaspoons arsenate of lead to one gallon of water.	Flea beetle. Black rot.	Necessary only when black rot is bad.
As demanded by disease and insect prevalence.	Bordeaux 4-4-50 and Lead Arsenate 2 or 3 lbs. 8 level teaspoons Bordeaux Mixture; 7 to 10 level teaspoons lead arsenate to one gallon of water.	Flea beetle. Black rot. Mildew. Grape Root worm.	If diseases are bad the grape should be sprayed about every 2 weeks. If only insects are injurious spray whenever necessary to control them.

SPRAY SCHEDULE FOR BUSH FRUITS

The gooseberry and currant have few enemies, and they are easily controlled. A DORMANT spray of Lime Sulphur solution, 1 to 7 or 8, or 4 tablespoons to one pint of water, is necessary only if scale is present.

Diseases are controlled by using either Bordeaux 3-4-50 or Lime Sulphur solution, $1\frac{1}{2}$ to 50 gallons, 7 tablespoons to one gallon of water, plus 4 level teaspoons lead arsenate. (Dry lime sulphur, 8 level teaspoons to one gallon). This is to be used at time leaves are unfolding and once or twice again after, at intervals of two weeks. Don't spray too near harvest.

Insects, mainly the imported currant worm, are

controlled by either spraying or dusting with lead arsenate. If dusting is used, dilute the dust, one part lead arsenate to nine parts air slacked lime. Apply just as soon as insect injury is noticed. White Hellebore 1 oz. to 1 gallon should be substituted for lead arsenate if it is necessary to spray shortly before harvest.

SPRAY SCHEDULE FOR CANE FRUITS

About the only use for sprays on these fruits is to control Anthracnose and the aim here should be to keep the new growth protected from infection. Apply lime sulphur solution, 4 tablespoons to one pint of water, or 2 pounds (dry) to 8 gallons of water when first two leaves have appeared. An application of lime sulphur solution $1\frac{1}{2}$ to 50 gallons;



7 tablespoons to one gallon of water, or Bordeaux 3-4-50, is advisable just before the blooming period. This disease is much more severe on black raspberries than on the other cane fruits.

Orange rust, mosaic and crown gall on bush fruits cannot be controlled by sprays. Dig out and destroy the infected plants and reset the plantation with clean plants in a new field.

SPRAY SCHEDULE FOR STRAWBERRIES

The strawberry seldom needs spraying. Certain varieties are subject to leaf spot and in such cases

Bordeaux 3-4-50 is useful. Several insects also attack this plant but are usually not plentiful enough to cause damage. Arsenate of lead, 2 lbs. to 50 gallons of water or 7 to 10 teaspoons to one gallon of water is indicated here. The first application—in case it is necessary—is made soon after growth begins and is followed in two weeks by another. A third spray may also be included—this one coming just before the blossoms open.

*More detailed spraying information may be secured free by writing the University of Nebraska College of Agriculture, Lincoln, Nebraska.

SPRAY SCHEDULE FOR ROSES

TIME	MATERIAL	PRINCIPAL PESTS AND DISEASES	REMARKS
Whenever lice and aphids appear.	Nicotine sulphate ("Black leaf 40" containing 40% nicotine) at the rate of one teaspoon to two gallons of water, adding about one ounce of soap (either whale oil or laundry soap) to make the spray stick.	Green fly. Aphids. Lice.	Many of the lice may be dislodged with a stiff stream from the garden hose.
Soon after leaves open.	Nicotine sulphate, same as above, or lead arsenate (powdered) one tablespoonful to 2 gallons of water, or Hellebore one ounce to 3 gallons water, or dusted on dry when diluted with double its weight in plaster or cheap flour.	American Rose slug. (The young greenish slugs skeletonize the upper surface of the leaves). The Bristly Rose Slug. (The greenish slugs eat irregular holes in leaf). The Coiled Rose Slug. (Larger than the preceding. They devour entire leaf).	A strong stream of water from the hose, if applied every few days, is effective in ridding the bushes of these pests.
Early summer.	Same treatment as described above for aphids.	Rose Leaf Hopper. (A small, nearly white leaf hopper, which feed on under side of leaves. Leaves often turn yellow or brown and die).	In spraying be sure and hit the under side of leaves.
When insect appears.	Arsenate of lead one ounce to 1½ gallons water.	The Rose-leaf Roller. (The black headed olive green caterpillars feed in the leaves and blossoms, which they roll and web).	Supplement spraying by handpicking.
Late May and early June.	Use arsenate of lead same as above; put some cheap molasses or glucose with the poison.	The Rose-Chafer, Rose Bug, or June Bug. (Grayish brown beetles ½-in. in length. Appear in great numbers and feed on leaves and blossoms).	When beetles are abundant they will do damage before poison kills them unless handpicked. Handpicking the beetles with pans containing kerosene will greatly reduce their numbers.
Winter or early spring.	Apply lime sulphur four tablespoons to one pint of water.	The Rose Scale. (White scales which appear along stems).	Cut off and burn badly infested twigs.
Early in June.	At first appearance apply arsenate of lead one ounce to 1½ gallons of water.	The Rose Curculio. (A bright red snout-beetle with black legs and snout. Eats holes in unopened buds and punctures flower stems).	In the small garden handpicking of insects into kerosene is most effective.

SPRAY SCHEDULE FOR ROSE DISEASES

TIME	MATERIAL	PRINCIPAL DISEASES	REMARKS
Beginning the latter part of May in the climate of central New York, from 7 to 12 applications through the summer will provide adequate protection. As soon as first leaves are well out they should receive a protective coat of fungicide.	Use Bordeaux Mixture 8 level teaspoons to 1 gallon of water. A finely ground mixture of 90 parts sulphur and 10 parts lead arsenate will be as effective as Bordeaux and will not greatly discolor the foliage. Apply dust early in morning when leaves are wet with dew.	Powdery Mildew. (A fungus disease appearing on unopened buds as a white mildew and on leaves as grayish or whitish spots). Black Spot. (A fungus disease existing within the body of the leaf, causing the leaf to fall, thus defoliating the plant. Easily recognized by the black spots on the leaves and petals, the leaves turning yellow and premature defoliation).	Fungus diseases to be combatted successfully, must be prevented. Spraying after the disease appears will not, in the case of Black Spot, prevent its destructive work. Keep the borders and garden clean, the ground well fertilized and cultivated.



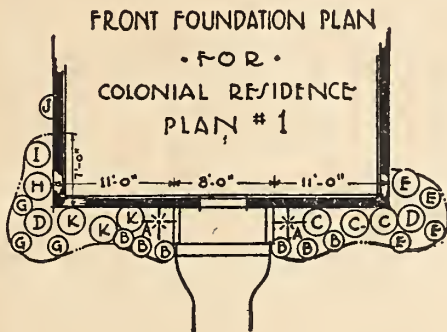
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Bignonia	13	Hedge Plants	12	Roses, Yellow June	15
Birch	23	Hibiscus	19	Roses, Rugosa	14-15
Bittersweet	13	Hollyhock	18	Rudbeckia	18
Blackberries	41	Honeylocust	24	Sambucus	7
Bleedingheart	16	Honeysuckle, Bush	7	Sedum	20
Boltonia	17	Honeysuckle, Vine	13	Shasta Daisy	17
Boxelder	23	Hydrangea	8	Shrubs	6-10
Bridalwreath	7	Introductory	2	Snowball	9
Bulbs and Roots	21	Iris	18	Snowberry	9
Butterflybush	17	Ivy	13	Spirea	9-10, 12
Buttonbush	7	Juniper	27-28	Spraying Guide	45-47
Cactus	21	Juniperus	27-28	Spruce	28
Cannas	21	Landscape Service	5	Stonecrop	20
Catalpa	23	Larkspur	18	Speedwell	20
Cercis	25	Lemon Daylily	19	Sea-Lavender	20
Cherries	35	Lilac	8	Strawberries	43
Chokecherry	23	Lillies	19	Strawberries, Everbearing	43
Chrysanthemum	17	Lily-of-the-valley	19	Sumac	10
Clematis	13	Linden	24	Sweet William	20
Columbine	17	Mallow Marvels	19	Sycamore	28
Coralberry	7	Maltese Cross	19	Tamarix	10
Coreopsis	17	Maple	24	Tiger Lily	19
Cornus	7	Mockorange	8	Tiptop Lily	19
Cotoneaster	7	Mountain Ash	25	Trees	23-28
Crab, Bechtel	23-24	Mountain Currant	7	Trumpet Vine	13
Cranberrybush	7	Mulberry	25	Ulmus	24
Creeper, Japanese	13	Mulberry Hedge	12	Van Houtte Spirea Hedge	12
Creeper, Virginia	13	Nannyberry	8	Viburnum	10
Currants	41	Ninebark	8-9	Vines	13
Daisies	17	Number of Trees and Plants on an Acre	29	Volga Poplar	12
Deciduous Trees	23-26	Oak	25	Wahoo	7
Decorative Dahlias	21	Olive	25	Walnut	28
Deutzia	7	Ornamental Shrubs	6-11	Weeping Trees	25
Dicentra	16	Painted Daisy	17	Windbreaks	25
Digitalis	17	Peaches	38	Weigela	10
Dogwood	7	Pears	34	Wisteria	13
Elder	7	Pea-Tree	8	Willow	28
Elm	24	Peonies	19	Yarrow	20
Englemann Ivy	13	Perennials	16-20	Yucca	20
Euonymous	7				
Evergreens	27-28				

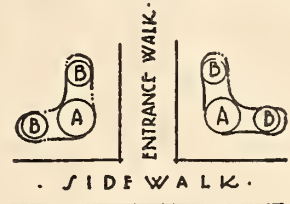
TYPICAL PLANTING PROBLEMS.

WE OFFER THESE PLANS TO OUR CUSTOMERS. PLANS MAY BE MODIFIED TO FIT INDIVIDUAL NEEDS.

• SHRUBS USED FOR PLAN #1



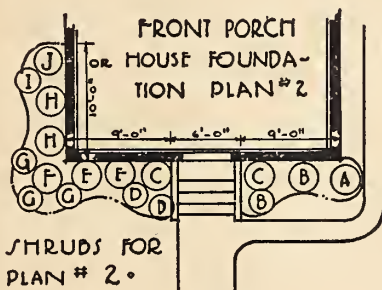
A—RED CEDARS
B—JAP. BARBERRY
C—BILLIARD SPIREA
D—VANHOUTTE SPIREA
E—SNOWHILL HYDRANGEA
G—FROEBEL SPIREA
H—PINK WEIGELA
I—JUNO MOCKORANGE
J—ENGELMANN IVY
K—GARLAND SPIREA



ENTRANCE WALK PLANTING
PLAN # 4.

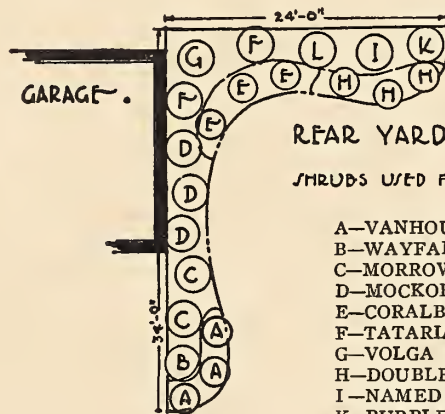
SHRUBS.

A—MOUNTAIN CURRANT
B—JAPANESE BARBERRY



SHRUBS FOR
PLAN # 2.

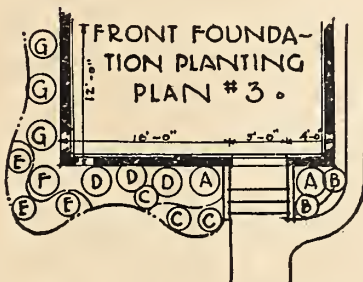
A—GARLAND SPIREA
B—SNOWBERRY
C—VANHOUTTE SPIREA
D—JAP. BARBERRY
E—BILLIARD SPIREA
F—REDLEAF ROSE
G—SNOWHILL HYDRANGEA
H—FORSYTHIA
I—THUNBERG SPIREA



PLAN #5
REAR YARD CORNER PLANTING

SHRUBS USED FOR PLAN #5

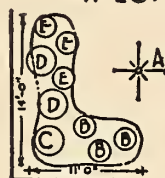
A—VANHOUTTE SPIREA
B—WAYFARING TREE
C—MORROW HONEYSUCKLE
D—MOCKORANGE
E—CORALBERRY
F—TATARIAN HONEYSUCKLE
G—VOLGA POPLAR
H—DOUBLE BRIDALWREATH
I—NAMED LILAC
K—PURPLE CHINESE LILAC
L—NAMED LILAC



SHRUBS USED FOR
PLAN # 3

A—GARLAND SPIREA
B—A. W. SPIREA
C—JAP. BARBERRY
D—THUNBERG SPIREA
E—SNOWHILL HYDRANGEA
F—PEEGEE HYDRANGEA
G—DOUBLE BRIDALWREATH

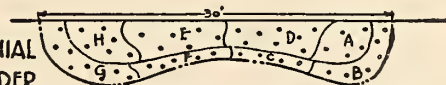
A LOT CORNER PLANTING PLAN #6



SHRUBS USED FOR PLAN #6

A—SPECIMEN EVERGREEN
B—JAPANESE BARBERRY
C—MORROW HONEYSUCKLE
D—VANHOUTTE SPIREA
E—SNOWHILL HYDRANGEA


HARDY PERENNIAL
FLOWER BORDER
PLAN # 7.



PERENNIALS USED IN PLAN #7.

A—RHYONSTROM PHLOX
B—SHASTA DAISY
C—COLUMBINE
D—LARKSPUR
E—HOLLYHOCK
F—GAILLARDIA
G—IRIS
H—BRIDESMAID PHLOX

WESTERN GROWN PLANTS for WESTERN PEOPLE

 HERE is no questioning the fact that those whose homes are in the Central West will find it much to their advantage to purchase nursery stock from this nursery which is located in the Central West.

In the first place the possibility of injury to the plants, shrubs or trees attendant upon shipping from a long distance is entirely eliminated.

Then, too, it is only natural that nursery products which have been propagated in mid-western soil will do best when replanted in mid-western soil.

Conditions of temperatures at our nurseries are much the same as throughout this section of the country, therefore it is entirely logical that plant life which has thriven at our nurseries will continue to thrive in your garden.

Finally, there is the important matter of service. We can render you quicker service than a distant nursery, and, understanding climatic and soil conditions of the middle west, we believe we are better qualified to give really intelligent and authoritative advice on any horticultural problem.

MARSHALLS NURSERIES
ARLINGTON, NEB.